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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

DONNA CURLING, ET AL.,	:	
	:	
PLAINTIFFS,	:	
vs.	:	DOCKET NUMBER
	:	1:17-CV-2989-AT
BRAD RAFFENSPERGER, ET AL.,	:	
	:	
DEFENDANTS.	:	

TRANSCRIPT OF BENCH TRIAL - VOLUME 7B PROCEEDINGS

BEFORE THE HONORABLE AMY TOTENBERG

UNITED STATES DISTRICT SENIOR JUDGE

JANUARY 18, 2024

MECHANICAL STENOGRAPHY OF PROCEEDINGS AND COMPUTER-AIDED

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P R O C E E D I N G S

(Atlanta, Fulton County, Georgia; January 18, 2024.)

THE PLAINTIFFS' CASE (Continued).

THE COURT: Morning. Have a seat.

All right. Counsel, where are we at?

MR. CROSS: We are ready to call our next witness,
Your Honor.

THE COURT: Who is that?

MR. CROSS: Frances Watson.

THE COURT: All right. Is she being called as an
adverse witness?

MR. CROSS: She is, Your Honor.

THE COURT: All right.

COURTROOM DEPUTY CLERK: Please raise your right
hand.

(Witness sworn)

COURTROOM DEPUTY CLERK: Please have a seat.

If you would please state your name and spell your
complete name for the record.

THE WITNESS: Marie Frances Watson. M-A-R-I-E,
F-R-A-N-C-E-S, W-A-T-S-O-N.

THE COURT: You're going to need to speak louder than
that, though -- okay? -- during your testimony.

THE WITNESS: Okay.

THE COURT: Thank you.

1 Whereupon,

2 MARIE FRANCES WATSON,

3 after having been first duly sworn, testified as follows:

4 CROSS-EXAMINATION

5 BY MR. CROSS:

6 **Q.** Good morning, Ms. Watson.

7 **A.** Good morning.

8 **Q.** I'm David Cross. I represent some of the plaintiffs in
9 this case, including Donna Curling.

10 Are you familiar with this lawsuit?

11 **A.** A little.

12 **Q.** Have you ever heard anyone talk about the Curling
13 litigation when you were working at the Secretary's office in
14 the investigations unit?

15 **A.** Just making reference to it. But no specifics.

16 **Q.** Okay. And so what is your current occupation?

17 **A.** Assistant deputy commissioner for the Georgia Department
18 of Revenue.

19 **Q.** And what is your -- just generally, your responsibilities
20 in that role?

21 **A.** I have three different divisions. One is the motor
22 vehicle division, local government services and the law
23 enforcement division, which is alcohol, tobacco and office of
24 special investigations.

25 **Q.** And are you still doing investigative work, or is it

1 different work now?

2 **A.** I have two law enforcement groups that report to me. I'm
3 still a POST certified law enforcement officer.

4 **Q.** Do you do investigations yourself now or you just
5 supervise?

6 **A.** I supervise.

7 **Q.** When did you begin that position?

8 **A.** In November of 2021.

9 **Q.** And did you move there directly from the Secretary of
10 State's office?

11 **A.** I did.

12 **Q.** So you -- was there a downtime or did you go -- well, let
13 me ask you this. When was your last day at the Secretary's
14 office?

15 **A.** I believe it was the 15th of November.

16 **Q.** Why did you leave the Secretary's office?

17 **A.** I was advised of an open position at the Department of
18 Revenue, which I applied for and interviewed for and was
19 selected.

20 **Q.** So was it your decision to leave the Secretary's office?

21 **A.** Yes.

22 **Q.** Okay. What was your role at the Secretary's office when
23 you left?

24 **A.** Chief Investigator of Investigations Division.

25 **Q.** How long were you in that role?

1 **A.** I went into the chief investigator role in June of 2019.

2 **Q.** Generally, what were your responsibilities in that role?

3 **A.** Our division had civilian inspectors which did inspections
4 for various professional licensing boards and also
5 investigators that did investigations for the professional
6 licensing boards and the other boards within Secretary of
7 State's office, including elections, corporations, securities,
8 and charities.

9 **Q.** The investigators in -- sorry.

10 What is the official title of that division within the
11 Secretary's office that you headed up?

12 **A.** I believe it is Investigations Division.

13 **Q.** The investigators in the Investigations Division that
14 reported to you, did those folks include certified law
15 enforcement personnel like yourself?

16 **A.** Yes.

17 **Q.** And did that -- do you recall Investigator Josh Blanchard?

18 **A.** Yes.

19 **Q.** Was he a certified law enforcement official?

20 **A.** Yes.

21 **Q.** Can you say briefly what is involved to become a certified
22 law enforcement official?

23 **A.** Yes.

24 There is some entry requirements as far as passing
25 physical, backgrounds, age requirements. The things that are

1 listed in the Georgia code that are -- for the requirements.

2 And psychological evaluations. Polygraph --

3 **Q.** Did you say polygraph?

4 **A.** Yes -- examination. There could be additional
5 requirements depending on the department. And after you pass
6 those, then you go to a police academy and complete the police
7 academy.

8 **Q.** Is there -- to get that certification, is there training
9 required on how to conduct an investigation -- how to conduct a
10 law enforcement investigation?

11 **A.** There are various trainings. There are -- in the basic
12 police academy training, there are interviews, interrogations,
13 rules of evidence, collecting evidence, you know, various
14 trainings throughout that. But then there's also additional
15 yearly trainings and further trainings along the way.

16 **Q.** How long is the police academy attendance that is required
17 for the certification?

18 **A.** It depends on when you went and which one that you attend.
19 But -- so I don't know at this particular time how long that
20 is, if it is 12 to 16 weeks. I'm not sure. And again,
21 depending on the department. Some departments have their own,
22 which are longer.

23 **Q.** When you were the head of the Investigative Division at
24 the Secretary's office, was there a general period of
25 attendance at the police academy that was expected to be a law

1 enforcement investigator in that division?

2 **A.** The officers that came to us were certified law
3 enforcements prior to coming to the Secretary of State's
4 office.

5 **Q.** When you were deciding whether to hire an investigator,
6 was there a minimum of days or weeks of attendance at the
7 police academy that you were looking for to decide whether
8 someone was qualified?

9 **A.** We looked for their experience and also the completion of
10 the -- a POST certified training academy in Georgia. So they
11 have a POST certification issued through Georgia.

12 **Q.** You mentioned that part of the training is on how to
13 conduct interviews and interrogations; is that right?

14 **A.** Yes.

15 **Q.** And can you give us just a general overview of the
16 training that investigators in the Investigative Division when
17 you were there -- the training that they were required to have
18 on how to conduct an interview or an interrogation?

19 **A.** That training would have been provided through a POST
20 certified academy or regional academy or in-service training.
21 The standard training that is put on by -- through the POST
22 officer certification standards and training.

23 **Q.** If a law enforcement officer were interviewing or
24 interrogating someone suspected of a crime, would it be
25 consistent with accepted law enforcement principles or

1 standards if that person says I did not commit a crime to just
2 accept that as true and not conduct any further investigation?

3 **A.** It would depend on the circumstances of that situation.

4 **Q.** What if it was someone that had shown themselves in the
5 past to be combative and noncooperative with an investigation?

6 **A.** It still would depend on that individual circumstance.

7 **Q.** So you still might just simply accept they are telling you
8 the truth and move on?

9 **A.** Depending on the circumstance.

10 **Q.** Ms. Watson, you should have a binder in front of you. If
11 can flip to Tab 18. And you can -- the first page you'll see
12 is just metadata so you see it with the document. You can
13 disregard that.

14 Flip to the substantive document. At the top it says
15 investigations and then there is ZBB.

16 Do you see that?

17 **A.** Yes.

18 **Q.** And if you look down at the bottom, you'll see that
19 there -- it says State defendants and there is a number next to
20 that.

21 **A.** Yes.

22 **Q.** Do you understand this is a document that was produced to
23 us by the State defendants in this case?

24 **A.** I'm not familiar with that. But ...

25 **Q.** Okay. Take a moment to just look through this, if you

1 would, and then tell me whether you recognize it.

2 **A.** Not specifically, I do not. It look --

3 **Q.** It is not a document you recall seeing before?

4 **A.** I could have at one time. It looks like something that
5 would be submitted with a -- to the office of budget for the
6 State is what it appears to be.

7 **Q.** Sorry. You said the office of what?

8 **A.** Professional budget, OPB.

9 **Q.** And a document like this would be submitted to the office
10 of professional budget for what purpose?

11 **A.** That was not my role. So I -- if we were requested to
12 provide data, we would provide answers or specific parts of
13 data points for them.

14 **Q.** So in your role as the head of the Investigative Division,
15 you had seen documents similar to this?

16 **A.** Yes.

17 **Q.** Okay. And if you look at the top, do you see where it
18 refers to ZBB?

19 **A.** Yes.

20 **Q.** Do you know -- is that somebody's initials? Do you know
21 what that refers to?

22 **A.** I do not know what that refers to.

23 **Q.** Anyone you can think of who had those initials or --

24 **A.** Not off the top of my head.

25 **Q.** Okay.

1 MR. CROSS: Your Honor, we move into evidence
2 Exhibit 597.

3 THE COURT: Are there objections?

4 MS. LaROSS: Yes, Your Honor. I'm not sure that this
5 witness has properly authenticated this document. She said she
6 may have seen it but doesn't recall it. So I'm not sure that
7 for purposes of authentication or identification that those
8 requirements are met on this document.

9 THE COURT: Well, is this --

10 MS. LaROSS: So it contains hearsay. I mean, she
11 speculated about that. But there is hearsay within it.

12 THE COURT: Apparently State defendants provided it
13 in response to discovery. I mean, it says State defendants and
14 then the number.

15 Does -- can the State defendants identify whether or
16 not they did produce this?

17 MS. LaROSS: Yeah. I believe we have, Your Honor.

18 THE COURT: And just sort of to cut to the quick, was
19 it information the State defendants developed or is it
20 something from a -- is it an interrogatory answer? Is it a
21 document that is used in the -- like as part of a report on
22 what the functions of the agency are?

23 I mean, let's -- I would rather we just, you know,
24 you actually -- if we could get some information about what it
25 is.

1 And let me start off just simply asking plaintiffs'
2 counsel, do you -- obviously you took this from the discovery
3 answer. To your knowledge, what is it and what was it in
4 response to? And then I'm going to turn it back to defense
5 counsel.

6 MR. CROSS: My understanding is when we asked for
7 investigative documents, this is one of the documents that was
8 produced by the State defendants concerning how the Secretary
9 of State conducts investigations.

10 So I was going to have her -- I was going to walk her
11 through it to -- really just to confirm that what is here, is
12 it or is it not consistent with her experience in how
13 investigations are conducted, to use it as a reference tool for
14 her.

15 THE COURT: All right.

16 MS. LaROSS: Your Honor, it is my understanding that
17 the investigative documents would have had a bit of a different
18 Bates number. So this may have just been a general document.
19 I don't know if it is a draft or where it is from.

20 THE COURT: Well --

21 MS. LaROSS: I don't believe it is in the pretrial
22 order either.

23 MR. CROSS: We have an agreement on that, guys.

24 MS. LaROSS: Excuse me? I didn't hear.

25 MR. CROSS: Yeah. That is not a fair objection.

1 MS. LaROSS: Okay.

2 MR. CROSS: The authenticity, Your Honor, she says
3 she has seen documents like this. They produced it. They
4 Bates stamped it. It is theirs. I'm not offering it for the
5 truth. I just want to walk her through it for her to tell me
6 whether certain things are consistent with the way things are
7 handled. She can tell us what is true or not.

8 THE COURT: All right. Well --

9 MS. LaROSS: To the extent that he is not offering it
10 for the truth and he is going to walk her through the specific
11 details of it, that would be using -- depending upon and
12 relying on the truth of the document. So we would still have
13 our hearsay objection there, Your Honor.

14 THE COURT: I don't think it relies on the truth of
15 the document. I think just simply you-all produced it. I
16 don't know when you produced it.

17 But does counsel know that it was produced by the
18 State in response to a particular request, and what was the
19 particular request?

20 MR. CROSS: I apologize, Your Honor. I don't -- when
21 they produce documents, they don't tie them to requests. I
22 don't know -- we have lots of requests this would be responsive
23 to, because we had lots of requests about conducting
24 investigations, investigations related to election security,
25 which this addresses specifically.

1 I can find a request if that helps the Court. But I
2 can't --

3 THE COURT: No. That is all right. I'm going to --
4 I mean, it clearly -- and I don't know why it was classified by
5 the State as confidential because it doesn't look very
6 confidential.

7 But in any event, why don't you direct the witness to
8 the specific information you want her to review and ask her if
9 that's --

10 MR. CROSS: That's what I was going to do.

11 THE COURT: -- what was consistent. And let's not
12 spend too much time on this.

13 MR. CROSS: Yes, Your Honor.

14 BY MR. CROSS:

15 Q. All right. Ms. Watson, you mentioned earlier that in the
16 Investigative Division when you were there you had inspectors
17 and you had investigators; right?

18 A. Correct.

19 Q. And investigations are a more in-depth examination of an
20 individual or situation than an inspection; is that fair?

21 A. Yes.

22 Q. And you said you had -- your division had responsibility
23 for investigation specifically into election issues; is that
24 right?

25 A. Yes.

1 Q. And that would include election security -- security of
2 the election system?

3 A. Responding to specific complaints or referrals to us, I
4 would say yes. But not the overall security.

5 Q. Your office would have been responsible for responding to
6 a complaint that could be submitted to the Elections Division
7 or the Investigations Division from the public, city or state
8 election officials, or others; is that fair?

9 A. We responded to complaints from numerous sources.

10 Q. And so if a concern came in that there was a potential
11 security issue with the election system and that came to your
12 office, you were expected to investigate that; right?

13 A. If it was within -- depending on what that specific
14 complaint was, yes.

15 Q. When you were the head of the office, was there a written
16 policy or procedure that laid out step by step this is how
17 investigators should investigate any complaint or concern
18 raised relating to the election system?

19 A. Not to my knowledge, no.

20 Q. So when you tasked someone like Investigator Blanchard
21 with investigating a complaint or a concern that came in
22 related to the election system, what was your expectation of
23 how he knew what to do, what steps to take?

24 A. Do you have a specific complaint that we're referring to?

25 Q. I'm just asking you generally: When you tasked him with

1 looking into a concern related to the election system -- well,
2 let me ask it this way.

3 Did you have an expectation that he would know what to do,
4 what steps to take to look into that?

5 **A.** It would depend on what the specific allegation is.

6 **Q.** So there would be some allegations where you would task
7 him with an investigation and you had no idea -- no expectation
8 as to how he would deal with that?

9 **A.** Again, it would depend. If I knew what the specific
10 allegation was, then I would know better how to advise him or
11 direct him.

12 **Q.** Isn't a basic principle of law enforcement is that it is
13 important to have standard operating procedures for things like
14 investigations?

15 **A.** For general reports and those procedures, yes.

16 **Q.** When you were the head of the Investigations Division, you
17 had no written standard operating procedure for how to conduct
18 an investigation related to the election system?

19 **A.** There was the general -- general guidance on how to
20 conduct the investigation as far as contacting complainants,
21 witnesses, obtaining statements, and documents if needed
22 depending on the individual complaint and case depending on
23 which -- each case is different. Each case requires different
24 follow-up.

25 **Q.** So to come back to my question, Ms. Watson, when you were

1 the head of the Investigations Division, there is not a written
2 document you could point the Court to that says here are
3 standard operating procedures for how to conduct an
4 investigation relating to the election system; is that right?

5 **A.** I would say that there is a training document that
6 outlines the -- what is required as far as a specific case that
7 is provided to the new hires and also do on-the-job training
8 between an -- individual investigators.

9 **Q.** Okay. So take a look at the -- going back to Exhibit 597,
10 the second page of the document, the top -- just to give you
11 the context, look at the bottom of the first page.

12 Do you see there is Number 4 heading, how are elections
13 investigations typically handled by the division?

14 Do you see that?

15 **A.** Yes.

16 **Q.** If you come to the top of the second page, do you see
17 that?

18 If you go to the end of the second line, do you see the
19 sentence beginning, depending?

20 Do you see that, Ms. Watson?

21 **A.** Yes.

22 **Q.** And here it reads, depending on the complexity of the case
23 determines the length of time it may take to complete. Some
24 cases may require one site visit to review documents or gather
25 a statement. Others may require many field interviews and

1 review of thousands of documents. When the investigators have
2 completed their initial investigations, the case file is
3 submitted to supervision for review.

4 Once the review process has been completed, the case file
5 is placed in a pending status awaiting presentation to the
6 State Election Board. Depending on the investigative findings,
7 recommendations are made to the State Election Board for action
8 on each case, such as being bound over to the Attorney
9 General's office when code violations are substantiated,
10 issuing a letter of instruction based on a code violation, or
11 even dismissal when there are no substantiated violations
12 found.

13 The State Election Board can act on the recommendations
14 given or they can move to make their own determination based on
15 the findings. Those actions can include referring the entire
16 investigative file to a county district attorney's office for
17 criminal prosecution depending on the severity of the
18 violation.

19 Do you see that?

20 **A.** Yes.

21 **Q.** In your time as the head of the Investigative Division,
22 does that generally capture the way investigations were
23 expected to be done with respect to concerns or complaints
24 regarding election investigations?

25 **A.** Generally, yes. Although we could receive numerous

1 complaints that were not -- did not have any specific
2 allegations of a code violation. They could be -- I received
3 numerous emails of the election was stolen or just a general
4 vent that there was nothing specific there.

5 There were also some that would require just one phone
6 call to be able to answer a voter's concern as to whether their
7 vote counted or any specific thing that would not require a
8 complete investigation.

9 **Q.** Are you familiar with Chris Harvey?

10 **A.** Yes.

11 **Q.** He was the State election director for several years;
12 right?

13 **A.** Yes.

14 **Q.** He was a State election director while you were the head
15 of the Investigative Division; right?

16 **A.** Yes.

17 **Q.** He sometimes referred election-related concerns to you for
18 investigation; correct?

19 **A.** Yes.

20 **Q.** He is -- he was the most senior election official in the
21 State -- well, let me put it this way.

22 He was the most senior official in the State whose
23 responsibilities were specific to elections across the State;
24 right?

25 **A.** I don't know whether he was the most senior or not. He

1 was certainly very knowledgeable.

2 **Q.** And you certainly took seriously any concern that
3 Mr. Harvey passed on to you and asked you to investigate
4 regarding elections; right?

5 **A.** He would send me anything that came to his attention that
6 was not something that the -- his election division would
7 follow up on. It could be something as far as an allegation
8 that some person voted twice or something that came from a
9 county official. It could be any number of things that he
10 would send to me, and we would review and process accordingly.

11 **Q.** Is the answer to my question yes or no?

12 **A.** We would take all -- all of the information that he would
13 provide, yes.

14 **Q.** Seriously? You would take it seriously?

15 **A.** Of course.

16 **Q.** Okay. Now, if you come back to the second page of 597,
17 you see there is a heading of five, when would an investigation
18 be completed?

19 Do you see that?

20 **A.** Yes.

21 **Q.** And then if you come down to Subparagraph B, it says,
22 average number of days that election cases remain open.

23 Do you see that?

24 **A.** Yes.

25 **Q.** And it reads, historically we have spanned a range from

1 115 to 199 days on average closures for elections
2 investigations. Our investigative timeline goal is being
3 established at 180 days on SEB investigations.

4 Do you see that?

5 **A.** Yes.

6 **Q.** And do you have any reason, based on your experience as
7 the head of the Investigative Division, that that data there is
8 inaccurate?

9 MS. LaROSS: Your Honor, excuse me. I would just
10 interpose an objection. The top of this document indicates
11 that -- the year 2018, which predated when Ms. Watson was chief
12 investigator. So I don't think the questions pertain to her
13 being chief investigator.

14 MR. CROSS: She can say it is consistent with her
15 time there or it is not.

16 MS. LaROSS: And we can establish that. I just want
17 to make sure the record is clear.

18 THE COURT: All right. It says 2018, parens, FY
19 2020, just to be complete.

20 MS. LaROSS: Yeah. If they are asking for -- you
21 know, if they were -- if it was a budgetary process, I don't
22 know, or anticipating. This might be based on 2018 data. But
23 just so the record is clear.

24 THE COURT: All right. Okay. Well, it seems like it
25 is projected for the 2020, and you are all welcome to go back

1 and look at what you did in order to produce this document,
2 too, if you want.

3 BY MR. CROSS:

4 **Q.** Ms. Watson, let me give you the question again.

5 The data that we read there that historically the
6 Investigations Division in the Secretary's office for elections
7 cases spanned a range from 115 to 199 days on average for
8 closures and had a goal of 180 days for SEB investigations, is
9 that generally consistent with your experience as the head of
10 the division?

11 **A.** I would say the average, taking the ones that may take
12 a -- either a one trip out compared to the ones that may take
13 over a year, that the average is consistent with what I'm
14 familiar with.

15 **Q.** Okay. All right. Flip to -- if you look at the bottom
16 right corner, there is a page that ends in 248. It is the
17 bottom number. I think it is about four pages in. And it has
18 got a heading of Number 17 on the top.

19 MR. CROSS: One more, Tony. Actually, they all have
20 248. Go to the one that ends in 252.

21 BY MR. CROSS:

22 **Q.** Do you see the heading 17, why is the Investigations
23 Division missing from the SOS website?

24 Do you see that?

25 **A.** Yes.

1 Q. Now, was the Investigations Division missing from the
2 Secretary of State's website at some point during your
3 experience or to your knowledge?

4 A. I don't know that it was missing. I don't think that the
5 Investigations Division had a separate tab for people to open.

6 Q. If you come down to heading 19, you see where it reads,
7 how many investigators are employed?

8 Do you see that?

9 A. Yes.

10 Q. It says, number of allotted positions.

11 And then it reads, including director, deputy director and
12 supervisors, there are 23 criminal investigators.

13 And then parenthesis, one director, one deputy director,
14 two supervisors, and 19 criminal investigators.

15 Do you see that?

16 A. Yes.

17 Q. In your time as the director of the Investigative
18 Division, how many positions did you have for criminal
19 investigators?

20 Was it roughly about this?

21 A. It was roughly that, yes, depending on vacancies.

22 Q. Okay.

23 All right. You can put that aside. Thank you.

24 All right. So you mentioned earlier one of the things
25 your division did was investigate concerns or complaints that

1 came in. Could be voters. It could be Mr. Harvey or others
2 related to the election system.

3 Right?

4 **A.** Yes.

5 **Q.** All right. Can you flip to Tab 13, please? And this is
6 Exhibit 254.

7 If you turn to the last page of Exhibit 254, you see there
8 is an email here that you sent to Ryan Germany and some others
9 on October 29 of 2020?

10 **A.** Yes.

11 **Q.** And you included Jordan Fuchs on this; right?

12 **A.** Yes.

13 **Q.** Why did you send this to Mr. Germany and Ms. Fuchs?

14 **A.** Because Ryan Germany is -- was our general counsel and
15 Jordan Fuchs was my direct supervisor.

16 **Q.** Do you know at this time who Ms. Fuchs reported to -- who
17 her direct supervisor was?

18 **A.** The Secretary, Brad Raffensperger.

19 **Q.** So there was only one -- you were senior enough in the
20 Secretary's office, there was only one supervisor between you
21 and the Secretary himself; right?

22 **A.** Correct.

23 **Q.** Okay. So fair to say this concern that came in in October
24 of 2020 was serious enough to you that you raised it with the
25 general counsel and one of the second most senior officials in

1 the Secretary's office; right?

2 **A.** Of course.

3 **Q.** What is reported here is that a poll worker at the
4 North Fulton Government Service Center provided an account of
5 an activity that occurred and states, on October 10 -- I'm
6 sorry. On October 23rd, 2020, one of the poll worker's
7 computers was accessed remotely somewhere else by taking
8 control of the computer and deleting information from the
9 computer.

10 Do you see that?

11 **A.** Yes.

12 THE COURT: I'm sorry. What is the exhibit number?

13 MR. CROSS: Oh, I'm sorry. It is Exhibit 254, Your
14 Honor.

15 THE COURT: And it is in Tab --

16 MR. CROSS: It is Tab 13.

17 THE COURT: Thank you.

18 BY MR. CROSS:

19 **Q.** So then if you come to the preceding page, you see there
20 is an email from Adrick Hall on October 29, 2020, copying you
21 and sent to James Callaway?

22 **A.** Yes.

23 **Q.** Who are Mr. Hall and Mr. Callaway?

24 **A.** James Callaway was the deputy chief investigator, and
25 Adrick Hall was the supervisor for the north -- Atlanta north

1 Georgia office of investigations.

2 **Q.** Are you familiar with someone named Mr. Braun that appears
3 to have been in the Investigations Division at that time?

4 **A.** Yes. He was an investigator in the Atlanta office.

5 **Q.** And did you or someone else in your office, to your
6 knowledge, task Mr. Braun with investigating this concern?

7 **A.** Yes.

8 **Q.** And we see here that Mr. Braun went out and obtained
9 written statements from the poll manager, the poll worker, and
10 IT personnel concerning this laptop; right?

11 **A.** Yes.

12 **Q.** And do you recall that the laptop was actually taken in by
13 the Secretary's office for examination?

14 **A.** Yes.

15 **Q.** And the laptop was provided to a company called Fortalice;
16 right?

17 **A.** That is correct.

18 **Q.** Fortalice is -- well, how would you characterize
19 Fortalice's role with respect to assisting the Investigations
20 Division while you were there?

21 **A.** I'm not familiar with any other involvement with them
22 other than that -- this -- they were -- in asking specifically
23 who we should forward the laptop to for evaluation, that was
24 the company that was provided.

25 **Q.** And who told you to provide it to Fortalice?

1 **A.** I cannot recall if it was Michael Barnes. That would be
2 the general person that I would go.

3 **Q.** Fair to say you took this concern seriously enough that
4 you alerted senior officials at the Secretary's office, made
5 sure your investigator conducted interviews with several folks,
6 collected a laptop, and had Fortalice examine the laptop;
7 right?

8 **A.** Correct.

9 MR. CROSS: Your Honor, we move Exhibit 254 into
10 evidence.

11 MS. LaROSS: Your Honor, I would object on the basis
12 of relevance. I would also object on the basis of hearsay that
13 the exhibit contains hearsay.

14 MR. CROSS: Your Honor, the report -- I'm sorry.

15 THE COURT: I'm going to allow the admission of the
16 document. It is clearly relevant, Number 1, to the issues in
17 this case. And the witness has already testified regarding it
18 and her having forwarded the complaint. Whether it is -- it
19 was forwarded for investigation, we don't know what that means,
20 what ultimately resulted, but I don't think there is any
21 question that that is not hearsay itself and -- so it is a
22 complaint and it is properly presented.

23 BY MR. CROSS:

24 **Q.** All right. Ms. Watson, will you flip to Tab 11, please.
25 This is going to be Exhibit 598.

1 If you look at Exhibit 598 behind Tab 11, you'll see it
2 has got the Secretary of State seal on it; right?

3 **A.** Yes.

4 **Q.** The heading is Investigations Division Report of
5 Investigation.

6 Do you see that?

7 **A.** Yes.

8 **Q.** Case name, Spalding County Board of Elections Supplies
9 Issues.

10 Do you see that?

11 **A.** Yes.

12 **Q.** There is a case number; right?

13 **A.** Yes.

14 **Q.** And then the investigator again here is Paul Braun?

15 **A.** Correct.

16 **Q.** The date of the report is June 17, 2021; right?

17 **A.** Yes.

18 **Q.** And you can take a moment to flip through and just tell
19 me: Do you recognize this report? Is this something you
20 recall seeing while you were the head of the unit -- of the
21 division?

22 MS. LaROSS: Your Honor, I'm not sure what question
23 is presented to the witness at this time. He asked are you
24 familiar with this report and then he also asked if it is
25 something she is used to seeing, if I heard him correctly.

1 THE COURT: You're going to have to speak up. I'm
2 sorry.

3 MS. LaROSS: I'm not sure what question is presented
4 to the witness. I think --

5 THE COURT: He is asking her whether she's familiar
6 with this complaint. That is what -- as I understand it.

7 MS. LaROSS: I wasn't sure if he was asking generally
8 if she --

9 THE COURT: He hasn't yet done that. He is asking
10 her whether -- laying a foundation.

11 Why don't you get your microphone closer to you and
12 then we won't have some of these issues. Okay? Thank you.

13 I know that you've got a lot of stuff. But just make
14 some room for the microphone so you don't go --

15 MS. LaROSS: My apologies.

16 THE COURT: -- through the frustration of my saying
17 speak up, speak up, speak up. All right?

18 Thank you.

19 MS. LaROSS: I understand.

20 THE COURT: You're not the first one. There are many
21 other people in here who have done the exact thing.

22 MS. LaROSS: My apologies, Your Honor.

23 THE COURT: No problem.

24 And people say that about me too.

25 I'm sorry. I'm having a little trouble with my real

1 time. So I don't really know what -- what -- what was -- is --
2 is this in the materials that you provided?

3 MR. CROSS: This is in the binder at Tab 11.

4 THE COURT: Tab 11.

5 All right. Thank you very much.

6 Take a look at it while we're taking a break.

7 **(There was a brief pause in the proceedings.)**

8 THE COURT: All right. Have you had an opportunity
9 to review the report of investigation?

10 THE WITNESS: It is fairly lengthy. But I do
11 recognize it as something I'm familiar with.

12 BY MR. CROSS:

13 **Q.** So, Ms. Watson, if you flip to -- well, let me take us
14 back.

15 What we have here is a fairly standard report prepared by
16 an investigator who reported to you at the time that you were
17 the head of the Investigations Division on an investigation
18 that he had conducted concerning election issues; is that fair?

19 **A.** Yes.

20 **Q.** Okay. Now, if we turn to Page 5 of the document, you'll
21 see the little page numbers in the middle of the bottom.

22 Do you see there is a number Paragraph 23? Sorry, go to
23 24. Sorry.

24 Do you see the number Paragraph 24?

25 **A.** Yes.

1 **Q.** Here Mr. Braun reports that, Poll Manager Sue Summerlin
2 reported in a statement that Poll Pads were not charged,
3 printers had not been filled with paper, and that three of the
4 six voting machines were missing security seals.

5 Do you see that?

6 **A.** Yes.

7 **Q.** So if you flip to Page 13, do you see there is an
8 investigative summary?

9 **A.** Yes.

10 **Q.** And the investigative summary spans, it looks like, maybe
11 another 20 or 30 pages.

12 Do I understand correctly the investigative summary in
13 these standard reports is meant to capture the steps taken by
14 the investigator -- information provided to the investigator
15 that is meant to be captured?

16 **A.** Yes.

17 MR. CROSS: All right. Your Honor, we move
18 Exhibit 598 into evidence.

19 MS. LaROSS: Your Honor, I just simply raise an
20 objection as to hearsay and --

21 MR. CROSS: I can help with that, Diane. I was just
22 going to help you. We're not offering anything in the report
23 for the truth. It is just meant to be an example of how these
24 reports are done and how the investigations are conducted. So
25 nothing is offered for the truth.

1 MS. LaROSS: Sure.

2 And also that we have an objection as to relevance.
3 There is a lot of matters that are covered in this report that
4 have nothing to do whatsoever with this case. I'm not sure
5 what he is talking about even as related to the claims. But we
6 have a general relevance objection as well.

7 THE COURT: Well, I'm going to admit it solely for
8 the purpose of demonstrating what an investigative report could
9 look like in the Elections Division when there would have been
10 a complaint.

11 MS. LaROSS: Thank you, Your Honor.

12 BY MR. CROSS:

13 Q. All right. Ms. Watson, flip to Tab 10 in the binder, if
14 you would, please.

15 THE COURT: It looked like -- and also have the
16 contents of it rather than just -- not for the purpose of
17 showing its actual findings, but that these are -- these are
18 the sorts of issues addressed in an investigative report.

19 BY MR. CROSS:

20 Q. So, Ms. Watson, do you have Tab 10 in front of you?

21 A. I do.

22 Q. And this is Plaintiffs' Exhibit 100.

23 And if you look at the bottom of Page 1, do you see that
24 there is an email that you forwarded on or sent to Ryan
25 Germany, Blake Evans, and Chris Harvey in November of 2020?

1 Middle of the first page.

2 **A.** Yes.

3 **Q.** And this is -- you sent this email to them on November 5th
4 of 2020; right?

5 **A.** That is what it says. I don't --

6 **(Unintelligible cross-talk)**

7 BY MR. CROSS:

8 **Q.** You don't have any reason --

9 **A.** -- this one specifically.

10 **Q.** Yeah. I'm sorry.

11 You don't have any reason to believe that date is wrong;
12 right?

13 **A.** No.

14 **Q.** Okay. And if we come down, what you are passing on to
15 them is a report of a potential election violation; right?

16 **A.** Yes. Making him aware.

17 **Q.** And again, you thought this complaint was serious enough
18 to raise with the general counsel, the State election director,
19 and Mr. Evans -- at the time, what was his role?

20 Did he report to Mr. Harvey at that time? Do you recall?

21 **A.** Yes.

22 **Q.** Okay. And do you recall who Laura Jones was? She worked
23 with the county.

24 **A.** I do not know specifically who she is.

25 **Q.** And if we come down to what is reported, do you see where

1 it reads, description of violation? And it goes on to state,
2 when we opened the large cabinets containing the voting
3 machines, we discovered that most of the machines, quote,
4 election database, doors were wide open and not secured with a
5 zip tie with serial numbers. Seals were already broken or a
6 zip tie was put on but was not put through the door. We also
7 found two paper ballots on the printer.

8 Do you see that?

9 **A.** I do.

10 **Q.** It goes on, also, all of the machines are supposed to show
11 zero ballots cast upon opening. One of our machines did show
12 one ballot had been cast on it.

13 Do you see that?

14 **A.** Yes.

15 **Q.** Then it goes on, we did not use this machine, but we did
16 use all the other machines that had the election database door
17 open.

18 Do you see that?

19 **A.** Yes.

20 **Q.** And then last but not least -- those are the complainant's
21 words -- we did not follow the protocol for opening the large
22 cabinets and starting up the machines. In training I was
23 instructed that all serial numbers on zip ties on doors were to
24 be compared with the serial numbers written down on the form.
25 We did not do this.

1 Do you see that?

2 **A.** Yes.

3 **Q.** Mr. Harvey responds to you on November 6th, 10-4, I assume
4 you're investigating; right?

5 **A.** Yes.

6 **Q.** And having thought that this was serious enough to raise
7 with general counsel and the State election director, fair to
8 say you did investigate this or had someone do it for you?

9 **A.** Yes.

10 **Q.** Do you know if a report was prepared?

11 **A.** Specifically, I do not know which case number or
12 investigation that it would be assigned in.

13 **Q.** But you expected a report would be prepared on an
14 investigation of this type; is that fair?

15 **A.** Yes.

16 MR. CROSS: All right. Your Honor, we move
17 Exhibit 100 into evidence.

18 And again, just -- we're not offering any of the
19 complainant for the truth. Again, what we want to show is how
20 the Secretary's office generally approaches concerns regarding
21 the election system.

22 Oh, this is already in. I'm sorry.

23 MS. LaROSS: It was already admitted.

24 MR. CROSS: Thank you.

25 MS. LaROSS: Okay.

1 BY MR. CROSS:

2 Q. All right. Let's flip to Tab 6, if you would, please.
3 And this is Exhibit 522.

4 Do you have Tab 6, Exhibit 522 in front of you?

5 A. I do.

6 Q. And you'll see that this is an email that you received
7 along with others at the Secretary's office from Ryan Germany
8 on December 10 of 2020.

9 Do you see that?

10 A. Yes.

11 Q. And Mr. Germany writes in this email, see below regarding
12 what a witness said about Coffee County today. I guess he is a
13 board member. What he is saying about us not helping when
14 asked is -- this is Mr. Germany's words -- completely false.
15 Frances, it may be good to try to talk to this guy while y'all
16 are down there tomorrow.

17 Do you see that?

18 A. Yes.

19 Q. And then Mr. Germany identifies the individual on the
20 Coffee board that he characterized as completely false as Eric
21 Chaney; right?

22 Do you see that?

23 A. Yes.

24 Q. And you, yourself, went down to Coffee County in December
25 of 2020 to conduct an investigation into election-related

1 concerns; right?

2 **A.** Yes.

3 **Q.** And so as of December 10, 2020, the general counsel of the
4 Secretary's office had put you on notice that Mr. Chaney had
5 made statements that were completely false; right, sir --
6 right, ma'am?

7 **A.** Can you ask me that again?

8 **Q.** Sure.

9 As of December 10 of 2020, the Secretary's general counsel
10 had put you on notice that Eric Chaney, a member of the Coffee
11 County election board, had made statements that were completely
12 false? You were on notice of that; right?

13 **A.** He had sent me this information. So yes.

14 **Q.** And did you have any reason to believe that the
15 information that general counsel provided you was inaccurate?

16 **A.** No.

17 **Q.** Did you have any reason to believe that Eric Chaney was
18 more trustworthy than the Secretary's own general counsel?

19 **A.** No.

20 MR. CROSS: Your Honor, we move Exhibit 522 into
21 evidence.

22 MS. LaROSS: Your Honor, I would object as to
23 hearsay. The exhibit contains statements by other people. I
24 mean, Ryan Germany was here and testified, and I'm not sure
25 that this was presented to him.

1 And I'm not sure either -- I don't believe that this
2 witness has identified the specific email as well. But the
3 primary -- my primary concern is with hearsay. And also -- and
4 relevance too.

5 MR. CROSS: Your Honor, she authenticated it. She
6 said she's on it. She received it.

7 What is attributed to Eric Chaney here we're
8 absolutely not offering for the truth of the matter. The
9 portions that we're concerned about for the truth are the
10 statements by Mr. Germany, who would be a party opponent in
11 this case as the general counsel of the Secretary himself.

12 MS. LaROSS: Sounds to me like it is being offered
13 for the truth of the matter, Your Honor. We would object.

14 MR. CROSS: Mr. Germany's statements, yes.

15 THE COURT: Well --

16 MR. CROSS: It is also a business record, Your Honor.

17 THE COURT: -- it is a business record. It is -- I
18 don't think -- I am not aware that it has been objected to in
19 the -- and if it has been what the objection has been on the
20 pretrial order.

21 But it is a business record that the witness has
22 identified. She is in the capacity to do that. And it is
23 relevant. So I'm going to -- I'm going to allow it.

24 And Mr. Chaney's statements are offered not for the
25 truth of them but, in fact, basically by Mr. Germany to

1 summarize the complaint that he has received or -- and what he
2 is saying about this and really what needs to be done in light
3 of it.

4 MS. LaROSS: Your Honor, just for the record, I did
5 want to put out that we did raise objections in the pretrial
6 order.

7 THE COURT: That is fine.

8 MS. LaROSS: The same objections as now.

9 THE COURT: That is fine.

10 It is admitted though, subject to the limitations
11 that have been recognized by counsel.

12 BY MR. CROSS:

13 Q. Okay. Ms. Watson, if you could flip to Tab 12, please.

14 THE COURT: I'm sorry. Did you ask her a question in
15 the end about this document? Just simply that she received it?
16 Is that all you wanted to ask?

17 MR. CROSS: No, I asked her several questions about
18 it, Your Honor. About what she knew based on -- about
19 Mr. Chaney based on Mr. Germany's statement that Mr. Chaney had
20 made completely false statements.

21 THE COURT: I'm just trying to -- did you or did you
22 not go down as a result to Coffee County? That is what I'm
23 trying to understand --

24 THE WITNESS: I did.

25 **(Unintelligible cross-talk)**

1 THE COURT: -- receiving this email?

2 Maybe I misunderstood something that was stated.

3 THE WITNESS: I did go to Coffee County in December
4 in reference to a -- to this matter, yes.

5 THE COURT: In reference to this matter? All right.
6 And did you issue a report as a result of it?

7 THE WITNESS: There was a report that was provided in
8 reference to recount issues. The investigator provided -- I
9 did not issue the report. But there was a final report.

10 THE COURT: Did you interview Mr. Chaney?

11 THE WITNESS: I cannot recall if Mr. Chaney was there
12 on the day that I visited Coffee County.

13 THE COURT: Are there any other questions occasioned
14 by mine?

15 MR. CROSS: Yeah. Your Honor stole my thunder. That
16 is where I was going.

17 THE COURT: I'm sorry.

18 MR. CROSS: Just kidding. I'm kidding.

19 We're going to pull up some surveillance video to
20 help.

21 THE COURT: All right.

22 BY MR. CROSS:

23 Q. All right. Ms. Watson --

24 THE COURT: I just wasn't clear whether she had been
25 there. I mean, I heard it in passing, but I wanted to make

1 churr I understood what had happened with her --

2 Were you there just for a day or you were there for
3 longer?

4 THE WITNESS: I was there just for the day.

5 THE COURT: Okay. Thank you.

6 Go ahead. I'm sorry.

7 MR. CROSS: Yeah. No, no, that is exactly where we
8 are going. So that is very helpful.

9 Tony, can you pull up Exhibit 140?

10 BY MR. CROSS:

11 Q. All right. Ms. Watson, do you see here on the screen
12 Exhibit 140? Do you see the date at the top, December 11,
13 2020, at 10:00 A.M. -- 10:01 A.M.?

14 A. Yes.

15 Q. Is that Agent Blanchard walking in?

16 A. Yes.

17 MR. CROSS: Okay. And, Tony, can we pull up the
18 video clip from that day, December 11?

19 **(Playing of the videotape.)**

20 BY MR. CROSS:

21 Q. Is that you walking in, Ms. Watson?

22 A. Yes.

23 Q. So do you recall that you did go down on December 11 and
24 meet with individuals at the Coffee County election office as
25 part of an investigation into election issues?

1 **A.** Yes.

2 MR. CROSS: And if we can pause it, Tony.

3 BY MR. CROSS:

4 **Q.** Do you recognize anyone in that room as Eric Chaney?

5 **A.** I do not know the gentleman's name at the end of the
6 table. So no, I do not recognize anyone as -- specifically as
7 Eric Chaney. I don't -- I don't know what he looks like.

8 **Q.** And as you sit here, do you know -- to your knowledge as
9 the head of the division, do you know whether you or anyone
10 else spoke with Mr. Chaney as part of this investigation that
11 you were there for on December 11?

12 **A.** I do not specifically recall, no.

13 **Q.** And Investigator Blanchard was tasked with this
14 investigation; right?

15 **A.** I specifically do not recall.

16 **Q.** Well, you can see him sitting in the room; right?

17 **A.** He is there. That's correct.

18 **Q.** Would you have had a reason to have him there if he was
19 not working on the investigation?

20 **A.** I know that he did work on several Coffee County
21 investigations. I would assume that he did. But specifically
22 I do not recall that he submitted the report.

23 MR. CROSS: All right. Tony, pull up the January 26
24 clip, please.

25 **(Playing of the videotape)**

1 MR. CROSS: Just pause it for a moment.

2 BY MR. CROSS:

3 Q. Do you see that this is January 26 of 2021, 8:08 A.M.,
4 Ms. Watson?

5 A. Yes.

6 Q. And that is Investigator Blanchard there; right?

7 A. Yes.

8 Q. Do you recognize the woman he is talking to as Misty
9 Hampton, the elections supervisor for Coffee County at the
10 time?

11 A. That appears to be her.

12 Q. And you met her in person on December 11; right?

13 A. Yes.

14 MR. CROSS: All right. Play this, Mr. -- Tony.

15 **(Playing of the videotape)**

16 BY MR. CROSS:

17 Q. So you can see Investigator Blanchard went into
18 Ms. Watson's [sic] office.

19 MR. CROSS: Pause it here.

20 BY MR. CROSS:

21 Q. You see the individual who came out who walked right past
22 Investigator Blanchard?

23 THE COURT: Was it Ms. Watson's office or was it --

24 MR. CROSS: I'm sorry. Ms. Hampton's office.

25 Thank you.

1 THE WITNESS: I see a gentleman, yes.

2 BY MR. CROSS:

3 Q. Do you know who that is?

4 A. No.

5 Q. Have you ever heard of Jeffrey Lenberg?

6 A. Not off the top of my head, no.

7 Q. You're aware that in January of 2021 there were
8 individuals who gained unauthorized access to the Coffee County
9 voting equipment as part of the State's election system; right?

10 A. I have heard that, yes.

11 Q. How did you first hear that?

12 A. I believe in the news.

13 Q. After you left the Investigative Division?

14 A. Correct.

15 Q. And do you recall that Ms. Hampton's office --
16 Investigator Blanchard went in and that Mr. Lenberg came out
17 of, her office has a door directly into the EMS server room?

18 A. That is what I recall.

19 MR. CROSS: And play the rest of the video, Tony.

20 BY MR. CROSS:

21 Q. You see Mr. Lenberg comes back in, goes in to someplace in
22 the back.

23 Now, at 8:12 Investigator Blanchard is leaving.

24 Do you see that?

25 A. Yes.

1 Q. Now, at 8:15 you see Mr. Lenberg is back at the door that
2 Investigator Blanchard walked out of.

3 Do you see that?

4 A. Yes.

5 Q. He goes back into Ms. Hampton's office; right?

6 A. Yes.

7 Q. 8:17 he comes out of Ms. Hampton's office with a backpack
8 that he did not have when he went in; right?

9 A. Correct.

10 Q. During your time as the director of the Investigations
11 Division, did Investigator Blanchard or anyone else raise with
12 you that while he was conducting an official investigation he
13 found a total stranger in the Coffee County elections office
14 that connects directly to the EMS server room?

15 A. No.

16 Q. And did you expect, based on his training and the
17 requirements of his job, that if he found something like that
18 he would have flagged a concern?

19 A. I think visiting elections offices around the -- in
20 various counties, there's numerous people that we're not
21 familiar with who they are that are in the election
22 supervisor's offices and in their facility. It would be a
23 concern if they were in the actual server room.

24 Q. But not a concern if they are in the election supervisor's
25 office connected to the server room? That is not a concern?

1 **A.** Not particularly.

2 **Q.** Okay. Let's flip to Tab 1, please.

3 Ms. Watson, if you turn to, in Tab 1, the third page of
4 the document -- and this is Exhibit 78 that is already in
5 evidence.

6 Do you see that there is an email on the third -- after
7 the slip sheet there is an email from James Barnes to Chris
8 Harvey on May 7 of 2021?

9 **A.** I'm sorry. What was your question?

10 **Q.** Do you see that email?

11 **A.** I see the email.

12 **Q.** And do you see, if you flip to the next page, there is a
13 photocopy of a business card from Doug Logan at Cyber Ninjas?

14 **A.** Yes.

15 **Q.** And if you come back to Mr. Barnes' email, do you see
16 where it reads, attachment, and it says cyberninja.pdf?

17 **A.** Yes.

18 **Q.** So do you understand that that Cyber Ninjas card was
19 attached to Mr. Barnes' email to Chris Harvey on May 7 of 2021?

20 **A.** Yes.

21 **Q.** All right. So come back to the first page of Exhibit 78,
22 if you would, please.

23 And you see that same email from Mr. Barnes to Mr. Harvey
24 with the Cyber Ninjas card at the bottom?

25 **A.** Yes.

1 Q. And then if you come up in the middle, you'll see that on
2 May 11 of 2021, four days later, Mr. Harvey forwarded this
3 on -- or he responded to James Barnes and he copied you and
4 Michael Barnes; correct?

5 A. Correct.

6 Q. And Mr. Harvey writes, thanks for sending this. I think
7 it might be prudent to see if there has been any contact
8 between the person on the card and anyone in your office and/or
9 if they have had any access to any of your equipment.

10 Do you see that?

11 A. Yes.

12 Q. And he explains, I have let our Investigations Division
13 and CES know, and they might follow up with you.

14 Right?

15 A. Correct.

16 Q. And then you forward this on to Pamela Jones who was --
17 was she a deputy director?

18 A. No. She was the area supervisor assigned to the Macon
19 office.

20 Q. You asked her to contact the county and verify what, if
21 any, contact Cyber Ninjas had with any election equipment;
22 right?

23 A. Correct.

24 Q. And so this concern came in from the county elections
25 office, election superintendent to the State director who asked

1 you to look into whether there was access to the equipment and
2 you had Ms. Jones look into that; right?

3 **A.** If there was any contact with that particular company;
4 correct.

5 **Q.** Right.

6 To be clear, any contact Cyber Ninjas had with any
7 election equipment? That was what you asked her to
8 investigate; right?

9 **A.** Correct.

10 **Q.** Okay. Now, flip to Tab 2, if you would, please, which is
11 Exhibit 145.

12 And if you look at the bottom of Exhibit 145, you see
13 there is an -- your email from Ms. Jones we just looked at on
14 May 11?

15 **A.** Correct.

16 **Q.** She then forwards that on to Josh Blanchard, the
17 investigator who was already investigating Coffee County on
18 election issues; right?

19 **A.** Correct.

20 **Q.** Investigator Blanchard responds to Ms. Jones the same day
21 about half an hour later.

22 Do you see that?

23 **A.** Correct.

24 **Q.** So about half an hour after he got this request to
25 investigate potential unauthorized access to the voting

1 equipment, he responds that he spoke with Mr. Barnes who said
2 he and his board have not been able to locate anything showing
3 where Cyber Ninjas did any consulting for Coffee County.

4 Do you see that?

5 **A.** Yes.

6 **Q.** He also adds, Mr. Barnes said he was going to contact the
7 county IT department and have them review Misty's emails to see
8 if there was any correspondence; right?

9 **A.** Correct.

10 **Q.** Ms. Jones then forwards this on to you two minutes later;
11 right?

12 **A.** Yes.

13 **Q.** And she explains that at this point there's still your --

14 **(There was a brief pause in the proceedings.)**

15 BY MR. CROSS:

16 **Q.** Sorry, Ms. Watson.

17 **A.** That's okay.

18 **Q.** So to go back, two minutes after Investigator Blanchard
19 flagged this or responded to Ms. Jones she sends this on to
20 you; right?

21 **A.** Correct.

22 **Q.** And she explains that as of 4:11 on -- 4:11 P.M. on
23 May 11, 2021, your investigator was still trying to determine
24 if there was any contact Cyber Ninjas had with the voting
25 equipment; right?

1 **A.** Correct.

2 **Q.** Your response was, thanks; right?

3 **A.** Correct.

4 **Q.** Are you -- do you recall any investigation, any
5 interaction you had with the investigators involved in this
6 after your email saying, thanks?

7 **A.** I don't specifically recall any -- any information, no.

8 **Q.** So it wouldn't surprise you to learn that the State has
9 not produced any documents or any witnesses that say that there
10 was anything done to investigate this further after you
11 responded to Ms. Jones saying, thanks?

12 **A.** I know that there was multiple -- there was a simultaneous
13 track with Michael Barnes following up with the machines. So
14 as far as that result, I'm not familiar with that.

15 **Q.** And when you say there was a simultaneous track of Michael
16 Barnes following up with machines, what do you mean?

17 **A.** That he was -- was to look into the server to make sure if
18 there was any unauthorized access to the machine.

19 **Q.** So there were sort of two tracks? There was what
20 Investigator Blanchard was doing?

21 **A.** Correct.

22 **Q.** And then Mr. Barnes was tasked with figuring out whether
23 there had been unauthorized access to the voting equipment?

24 **A.** Correct.

25 **Q.** And that included the EMS server; is that right?

1 **A.** You would have to check with him.

2 **Q.** So these two tracks were moving -- well, let me ask it
3 this way.

4 You and your investigators did not have responsibility for
5 what Mr. Barnes was doing? He was doing his track and you were
6 doing yours?

7 **A.** Correct.

8 **Q.** Okay. And the two weren't really coordinating? You just
9 knew that that was happening?

10 **A.** Correct.

11 **Q.** And so when Ms. Jones responded to you on May 11 that your
12 office was still trying to determine if there was any contact
13 between Cyber Ninjas and the voting equipment, you didn't think
14 it was important to follow up and figure out whether that
15 contact had actually occurred? It was sufficient to just say
16 thanks and move on with whatever else you had --

17 **A.** No. My understanding is that they are still working on
18 it. At that time that they were still following up on it, that
19 that wasn't the completion of it, that they were still working
20 on it.

21 **Q.** Ms. Watson, I just asked you a moment ago if you were
22 aware of any further investigation and you said no.

23 Are you now saying that you are aware of further
24 investigation?

25 **A.** I thought you said was there any further communication.

1 But my understanding, based on this, is that, yes, they were
2 still waiting on the county IT department to follow up and to
3 provide further information, so it wasn't that they were
4 finished. This was just an update of where they were at that
5 particular moment.

6 **Q.** No one ever came back to you with any further update;
7 right? You can't -- you can't recall --

8 **A.** I can't -- I can't recall that they did.

9 **Q.** And you are aware that Mr. Blanchard testified just
10 yesterday that there was no follow-up?

11 **A.** No, I'm not aware of that, no.

12 **Q.** Is that consistent with what was expected of an
13 investigator who was looking into whether there had been a
14 potential breach of the voting system? To just let it die on
15 the vine?

16 **A.** I think that his -- his instructions were to find out if
17 there was contact between -- you know, involving the -- a
18 person having a business card in their possession and whether
19 they had any contact with that particular company and was there
20 any access, yes.

21 **Q.** Okay. So the question that was outstanding on May 11,
22 2021, for your office was whether Cyber Ninjas had had
23 unauthorized access with the voting equipment?

24 MS. LaROSS: Objection, Your Honor. There is no
25 foundation. No facts in evidence.

1 MR. CROSS: The exhibit -- this has already been
2 testified to by Agent Blanchard and others. This is in the
3 record.

4 THE COURT: It is in the record.

5 Go ahead.

6 BY MR. CROSS:

7 Q. So, Ms. Watson, on May 11, 2021, the question that was
8 outstanding for your office was whether Cyber Ninjas had had
9 unauthorized access to voting equipment in Coffee County?
10 We're agreed on that; right? That is what they were tasked to
11 figure out?

12 A. They were -- they were tasked to find out if there was any
13 particular contact with that company and what that contact may
14 have been.

15 Q. You keep saying with that company. Let's come back to
16 what your words were because it matters.

17 Look at Exhibit 145, your email to Ms. Jones. Are you
18 with me?

19 A. On which one?

20 Q. Exhibit 145, the bottom of the page.

21 A. Okay. Go ahead.

22 THE COURT: It is also on your --

23 BY MR. CROSS:

24 Q. It is on your screen.

25 What you tasked Ms. Jones with -- not just as their

1 contact between the company Cyber Ninjas and the county. You
2 were very precise, verify what, if any, contact Cyber Ninjas
3 had with any election equipment.

4 That was the question that was outstanding at 4:11 P.M. on
5 May 11, 2021; right?

6 **A.** Correct.

7 **Q.** My question to you is this: The fact that no one ever got
8 an answer to that question, according to Investigator
9 Blanchard, no follow-up, just left it with your email at,
10 thanks, is that consistent with the way your office conducted
11 election security investigations while you were there, yes or
12 no?

13 **A.** Again, according to this email, is that they were still
14 waiting at that particular time as of that date. That is what
15 I was familiar with.

16 **Q.** Right. My question to you is what we have just walked
17 through here and the way things stood with an unanswered
18 question about a potential breach of the system at 4:11 P.M. on
19 May 4th.

20 **A.** I was not, based on this email, looking at a potential
21 breach of the system. I was looking at a possession of a
22 business card that was in an elections office and verifying
23 whether or not they had contact with that particular company
24 and for what reason.

25 And my understanding, based on the email that was sent,

1 was that they were still waiting on further information. And I
2 do not recall any particular information after that prior to me
3 leaving.

4 **Q.** And leaving that as an open question, is that consistent
5 with the way your office handled investigations into election
6 security issues?

7 Just yes or no, is this how you guys did it?

8 **A.** I would anticipate that there would be additional
9 information after -- after this communication.

10 **Q.** You expected there would have been follow-up and further
11 investigation; right?

12 **A.** I would expect that there would be additional information
13 forthcoming. Yes, we have located information that
14 corroborates there was contact or there was no contact.

15 **Q.** And does it surprise you that that never occurred?

16 **A.** It would be surprising to me that there was not a
17 completion of that.

18 **Q.** Did it trouble you in May of 2021 that you never heard
19 from any of your investigators about this ever again? That
20 this question was just left open in the ether? No one knew?

21 **A.** There was a lot of open investigations that were taking
22 place in -- at simultaneously. And so this was not one that I
23 particularly recall going back to to say, can you give me a
24 further update on this or, you know, has it been closed, has it
25 been resolved.

1 Q. And just so we're clear, you testified a moment ago, when
2 I said this was an investigation into a potential breach of the
3 voting system, you said it was not.

4 Did you have any reason to believe that the State -- the
5 State Election Board had authorized Cyber Ninjas to access
6 voting equipment anywhere in the State?

7 A. I did not have any allegation that they had accessed
8 the -- a voting system. Only that there was a -- one of their
9 cards that had been located in an office.

10 Q. All right. Ms. Watson, we're just going to keep coming
11 back to your words.

12 You said, verify what, if any, contact Cyber Ninjas had
13 with any election equipment? You wrote that? That was the
14 task; right?

15 A. Correct.

16 Q. Okay. My question to you is: Did you have any reason to
17 believe that the State Election Board or anyone with authority
18 on behalf of the State had authorized Cyber Ninjas to access
19 election equipment in Georgia, yes or no?

20 A. I was not familiar with that, no.

21 Q. You had no basis to believe that they had legal
22 authorization; right?

23 A. No.

24 Q. All right. Flip --

25 MR. CROSS: Oh, sorry, Your Honor.

1 THE COURT: Tell me what exhibit -- tab you were on
2 for this. I want to just make sure I --

3 THE WITNESS: 2.

4 MR. CROSS: Tab 2, and it is Exhibit 145, Your Honor.

5 I think we put this in through Ryan Germany. But I
6 apologize. I don't remember. So we will move it into evidence
7 just to make sure it is clear.

8 **(There was a brief pause in the proceedings.)**

9 MR. CROSS: It is in. All right. Thank you. Thank
10 you. I appreciate that.

11 BY MR. CROSS:

12 **Q.** I'm almost done, Ms. Watson.

13 Can you flip to Tab 20?

14 **A.** Okay.

15 **Q.** Now, if you look at Tab 20, you see that it begins with an
16 email from Vincent Russo who represents the State defendants.

17 Are you aware of that? Have you dealt with Mr. Russo
18 before?

19 **A.** I recognize the name; correct.

20 **Q.** And here there is an email from Steven Ellis in the chain
21 with Mr. Russo on June 10 of 2022.

22 Do you see that?

23 **A.** Yes.

24 **Q.** And the email is to Sara Koth.

25 Do you see that?

1 **A.** Yes.

2 **Q.** Are you aware that Ms. Koth replaced you as the head of
3 the Investigations Division?

4 **A.** Yes.

5 **Q.** And Steven Ellis writes, can you get with Meaghan and let
6 her know the status of the Coffee County case and how long it
7 might take to get the information requested by the Judge
8 pertaining to the open investigations?

9 Do you see that?

10 **A.** Yes.

11 **Q.** Now, if you flip to Tab 21, you will see there is a
12 spreadsheet. It is pretty hard to read. So we're going to
13 pull it up on the screen for you.

14 And can you go to row 148?

15 What I have got in front of you is the original Excel file
16 that was produced as an attachment to that email.

17 MR. CROSS: And if we can go -- is it 148 -- go to
18 row 148, Tony.

19 BY MR. CROSS:

20 **Q.** So just a couple of quick questions on this. Do you see
21 that there is an investigation number here SEB 2015-0404?

22 **A.** Yes.

23 **Q.** That refers to Appling County GEMS server violation?

24 **A.** Yes.

25 **Q.** And then if you come over to case description, it says,

1 server connected to the internet.

2 Do you see that?

3 **A.** Yes.

4 **Q.** And before we get into the substance, the spreadsheet that
5 is reflected here that has a listing of various county
6 investigations and the various information, have you seen this
7 information captured in a system at the election -- at the
8 Investigations Division?

9 **A.** Yes.

10 **Q.** And what system captures this information when you were
11 there?

12 **A.** The case management system.

13 **Q.** And is that case management -- what is that case
14 management system used for?

15 **A.** To track the case assignments when a -- cases are opened,
16 both for inspections and investigations.

17 **Q.** And who has access to input information into that system?
18 Who uses it in the ordinary course of their work in that
19 division while you were there?

20 **A.** The chief investigator, the deputy chief investigator, the
21 inspection and investigation supervisors.

22 **Q.** And is it fair to say that it was expected that whoever in
23 your office at the time was inputting information in this
24 system that they would make a good faith effort to put
25 information they thought was accurate based on what was

1 available to them at the time?

2 **A.** Yes.

3 **Q.** So the investigation we just looked at there concerning
4 the GEMS server being connected to the internet in a Georgia
5 county, are you -- have any familiarity with that
6 investigation?

7 **A.** I do not recall that specifically. That is one of the
8 things that is checked when the -- Michael Barnes and his group
9 visits with the counties is to make sure if they have any
10 connection to the internet.

11 **Q.** All right. So that -- that is an issue that, again, like
12 the Coffee County EMS server issue, this is something you would
13 have -- you would have expected Michael Barnes' organization to
14 investigate?

15 **A.** We could have gotten the complaint from his group. But we
16 would send out an investigator to do interviews and then write
17 up a case to be presented to the State Election Board.

18 **Q.** Okay. But as you sit here, you don't -- there is no
19 information you can provide about this?

20 **A.** No.

21 **Q.** Okay.

22 MR. CROSS: Your Honor, we move Exhibit 599 into
23 evidence, the cover email and the Excel file.

24 MS. LaROSS: Your Honor, our objection is hearsay to
25 this document.

1 MR. CROSS: Your Honor, the cover email -- oh, I'm
2 sorry. I'm sorry.

3 MS. LaROSS: Excuse me. I think the -- sorry. There
4 is a case description, but it doesn't talk about the facts of
5 the case or give specifics about the case.

6 MR. CROSS: Your Honor, the cover email is both a
7 party opponent statement. It is the Secretary of State's
8 office. It is also a business record. And in the document,
9 the attachment, we have laid the foundation is also a business
10 record. This is what they use to track their investigations in
11 the ordinary course. It has sufficient indicia of reliability
12 insofar as they expect it to be accurate.

13 On the objection about facts, that is actually not an
14 evidentiary objection. And we welcome her to bring a witness
15 and talk about what they found with this GEMS server
16 potentially being connected to the internet.

17 MS. LaROSS: Your Honor, in particular with respect
18 to the case description column, that only includes allegations.

19 MR. CROSS: She doesn't get to testify. That is not
20 an objection. That is not an objection.

21 MS. LaROSS: That is how --

22 MR. CROSS: We have a witness on the stand. That is
23 not appropriate.

24 MS. LaROSS: Hang on, if you would, David. That is
25 part of my hearsay objection.

1 THE COURT: Well, it is not being admitted for the
2 truth of the matter. It is being -- I mean, this -- let me
3 just clarify.

4 This page here, is it -- I don't have the cover
5 letter in front of me.

6 MR. CROSS: It is Tab 20, Your Honor. Tab 20.

7 I mean, the other thing again, this was -- this
8 spreadsheet was produced at Your Honor's directive. You can
9 see above, it is information requested by Your Honor.
10 Mr. Russo has asked them to pull this together.

11 So for them to now suggest that they pulled something
12 together for the Court that Your Honor cannot consider, I'll
13 just say it is troubling.

14 THE COURT: Is this the regular format that you
15 maintained for tracking the progress of investigations and the
16 nature of them -- of the investigations?

17 THE WITNESS: It is a way to track open
18 investigations.

19 THE COURT: Is it what you-all used?

20 THE WITNESS: It is what we would use when I was
21 there. The case titles do not necessarily reflect all of the
22 allegations that are included in a particular case.

23 THE COURT: It is an abbreviated version; is that
24 right?

25 THE WITNESS: It could have an overall, but there

1 could be 15 other allegations within that open case that are
2 not --

3 THE COURT: But you don't include all of them in your
4 summary chart?

5 THE WITNESS: Correct. Correct.

6 THE COURT: It is admitted for the purpose of showing
7 how complaints were tracked, not for the truth of any
8 information actually contained in them.

9 And the letter -- are you seeking to introduce the
10 letter too?

11 MR. CROSS: Just for the context, Your Honor.
12 Because it indicates why this was pulled, who pulled it.

13 THE COURT: All right. For that purpose only, it is
14 introduced. And it was produced in the course of this -- of
15 the litigation and it is -- I don't have any reason to believe
16 that it is not, in fact, a true letter of -- reflecting the
17 correspondence.

18 But again, it is not admitted for the truth of the
19 information. But just simply is to re-count the transmission
20 and the questions asked.

21 Do you have more?

22 MR. CROSS: Yes, Your Honor. I'm just about done.

23 BY MR. CROSS:

24 Q. Can you flip to Tab 17, please?

25 The spreadsheet we were just looking at, I think you

1 testified that the information there resides in a system called
2 SharePoint?

3 **A.** I refer to it as case management. But it is a SharePoint.

4 **Q.** Thank you.

5 If you look at Tab 17, do you see that it says case
6 stat -- stops at SharePoint stats. And then there is a case
7 number SEB 2020-250 Coffee County?

8 Do you see that?

9 **A.** Yes.

10 **Q.** And do you recall that SEB -- this case number corresponds
11 to the investigation that Investigator Blanchard was tasked
12 with and that you went to the Coffee County office for in
13 December of 2020?

14 **A.** I don't recall the specific case number. So I can't tell
15 by this.

16 **Q.** If you come down, do you see -- well, let me ask it this
17 way. The report we have here, have you seen reports like this
18 from the case management system before?

19 **A.** Yes.

20 **Q.** Okay. And the information here, you can see that there
21 was an investigation opened on December 9th in 2020 into Coffee
22 County.

23 Do you see that?

24 **A.** Yes.

25 **Q.** And does that -- do you recall that the investigation you

1 were there for on December 11 opened on or around that date?

2 **A.** I would assume so. I don't recall the specific date. But
3 yes.

4 **Q.** You don't have any reason to believe that that is wrong;
5 right?

6 **A.** No.

7 **Q.** And then you can see that it was submitted to the
8 supervisor on September 28, 2021; right?

9 **A.** Correct.

10 **Q.** You don't have any reason to believe that that is wrong;
11 right?

12 **A.** No.

13 **Q.** No?

14 And you were still the head of the Investigations Division
15 at that time; right?

16 **A.** Correct. That would have been when it was submitted to
17 Pam Jones.

18 **Q.** And then you see it was presented to the board on
19 December 14 of '21?

20 Do you see that?

21 **A.** Yes.

22 **Q.** And you don't have any reason to believe that that is
23 wrong; right?

24 **A.** I was no longer there. But I don't have any reason to
25 believe it was incorrect.

1 Q. Okay. And then lastly, do you see it says date closed in
2 investigation?

3 Do you see that?

4 A. Yes.

5 Q. And it is closed the same day that it was submitted to the
6 supervisor; right?

7 A. That is what it -- what it says.

8 Q. And you were still there?

9 A. I was still there on that date. It should not have been
10 listed as a closed investigation until after it was presented
11 to the State Election Board.

12 Q. Okay. But in this report from the case management system
13 that was produced by the Secretary's office, it is indicated as
14 closed the same day as submitted; right?

15 A. Yes.

16 Q. And is -- you were there at that time. Based on your
17 recollection of the events, you don't have any reason to
18 believe that the entry here is inaccurate; right?

19 A. No.

20 MR. CROSS: Your Honor, we move Exhibit 600 into
21 evidence.

22 MS. LaROSS: No objection, Your Honor.

23 THE COURT: It is admitted.

24 BY MR. CROSS:

25 Q. All right. Lastly, do you agree that it is important to

1 investigate potential election security concerns and
2 complaints -- did you believe it was important to do that when
3 you were the head of the division?

4 **A.** Yes.

5 **Q.** And do you agree that delays in investigations can have a
6 serious impact on voters' confidence?

7 **A.** I think that you need to do it as efficiently and as
8 promptly as you can for accurate results.

9 **Q.** So yes or no, do you agree that delays in investigations
10 can have a serious impact on voters' confidence?

11 **A.** Yes.

12 **Q.** Are you aware that the Secretary of State himself just
13 said that this week?

14 **A.** I'm not.

15 **Q.** Lastly, we talked a little bit about whether you were
16 familiar with this lawsuit.

17 During the time that you were the head of the
18 Investigative Division, did anyone ever come to you -- this is
19 just a yes-or-no question.

20 Did anyone ever come to you and ask you to help in
21 preparing any kind of information for discovery in this case?

22 **A.** I can't say specifically if they asked me for information
23 in pulling documents. It usually wasn't in a context of -- for
24 a particular case or not. It was, can you provide da da da da
25 da.

1 Q. So as you sit here, you can't recall a specific occasion
2 where somebody came to you and said, hey, we have got this
3 lawsuit concerning the reliability of the BMDs. We need to
4 pull some information for discovery purposes?

5 A. They could have.

6 Q. I'm sorry?

7 A. They could have. I don't specifically recall.

8 Q. Were you aware that we served a discovery request in this
9 case in the summer of 2021 asking if the State was aware of any
10 suspected or potential unauthorized access of any voting
11 equipment in the State?

12 Were you ever aware that that was a request that was
13 asked?

14 A. I don't specifically recall receiving anything. I could
15 have. I don't -- I don't recall.

16 Q. Do you recall you or to your knowledge anyone else in the
17 Investigations Division being asked that question for the
18 purpose of this litigation or any litigation?

19 Anyone ever coming to you or anyone in your office and
20 saying, hey, we need to figure out if there was a potential
21 unauthorized access to the voting equipment and whether we ever
22 looked into that? Did that question ever come to you?

23 A. I don't specifically recall.

24 Q. And you're not aware of that question going to any of your
25 investigators either; right?

1 **A.** I wouldn't know if any of them got a specific request that
2 I wasn't familiar with.

3 **Q.** But as you sit here, you're not aware of that question
4 being posed; right?

5 And given you were the head of the division, a question of
6 that magnitude that is going to be provided in the context of
7 litigation, would you expect to be included?

8 **A.** I would expect so.

9 MR. CROSS: Thank you, Your Honor.

10 CROSS-EXAMINATION

11 BY MR. BROWN:

12 **Q.** Good morning, Ms. Watson. My name is Bruce Brown, and I
13 represent some of the plaintiffs in this case.

14 Who, as between you and Michael Barnes, while you were
15 there, would have responsibility for conducting voting system
16 security investigations?

17 **A.** It would depend on what the allegation is and what
18 specifically you're referring to as far as voter security
19 equipment. It could be something that, again, they are not
20 putting the zip ties on the machines. And certainly that would
21 come to the Investigations Division to look into. And also
22 when we do our inspections at the polling places to check to
23 make sure that they have the proper seals when we are there and
24 we're doing our inspections.

25 So there are -- I would say it is a shared responsibility.

1 Q. What would typically go to Mr. Barnes' group?

2 A. Things such as the allegations involving the Fulton County
3 laptop that it would need to -- you know, where -- we would
4 consult with them on what would we need to do with it. Who do
5 we -- do we provide it to you? Do we need to send it straight
6 to someone else for forensics or what?

7 There could be allegations as far as -- or problems with,
8 for example, posting a password on a GEMS server that was not
9 secure and we would consult with them to look at that machine
10 and verify whether it had been inappropriately accessed or not.

11 Q. And that's why Mr. Harvey -- you saw the email with the
12 Cyber Ninjas card?

13 A. Yes.

14 Q. That is why Mr. Harvey tasked both you and Michael Barnes
15 with the follow-up on that; is that correct?

16 A. I can't say what Harvey's intentions were with that. Only
17 that, you know, that was the direction.

18 MR. BROWN: Thank you very much.

19 **(There was a brief pause in the proceedings.)**

20 BY MR. BROWN:

21 Q. Were you aware that Mr. Persinger was engaged in May of
22 2021?

23 A. Who?

24 Q. An expert by the name of Persinger.

25 A. No.

1 Q. Do you -- are you familiar with that name?

2 A. No.

3 Q. Or how about any forensic investigator hired in May of
4 2021?

5 A. Not specifically.

6 Q. For Coffee County?

7 A. I'm not -- not specifically, no.

8 Q. Thank you.

9 MR. CROSS: Your Honor, we all just saw what happened
10 here. These are questions from -- it's not even his client. I
11 mean, how long are we going to do this?

12 THE COURT: He advises he is his consultant.

13 And, obviously, Counsel, you have -- even if
14 Mr. Favorito is your consultant, you still have an obligation
15 to have reviewed questions in advance that are -- so that we're
16 not just having the consultant's questions as opposed to ones
17 that you have vetted that he may have suggested to you.

18 All right?

19 MR. CROSS: It also does not appear that Mr. Davis is
20 here again today.

21 THE COURT: I have already taken notice of that.

22 Thank you.

23 MR. OLES: Thank you, Judge. I understand.

24 CROSS-EXAMINATION

25

1 BY MR. OLES:

2 **Q.** Ms. Watson, my name is David Oles, and I represent Ricardo
3 Davis in this suit, one of the plaintiffs. I just have a
4 couple of questions for you regarding your position as the
5 chief investigator.

6 There were some allegations or there were some questions
7 raised in 2020 regarding the existence of some pristine ballots
8 during a mail-in ballot audit.

9 Were you involved with the -- of any investigation with
10 that? Do you recall?

11 This was Fulton County.

12 **A.** I'm familiar with allegations that were in Fulton County.
13 I would have assigned it to investigators to investigate.

14 **Q.** Okay. Do you -- you recall this -- do you recall specific
15 assertions that there were stacks of ballots that were pristine
16 and unfolded? Do you recall assigning someone to investigate
17 that?

18 **A.** It was part of the Fulton County investigations.

19 **Q.** Okay. Do you recall who was assigned to that?

20 **A.** I know that Paul Braun worked on part of it. Again, I
21 believe that that was still open when I left. And it may have
22 been assigned to additional investigators.

23 **Q.** Okay. So were you personally involved in it at all?

24 MR. BROWN: Your Honor, I object to this line of
25 inquiry. This is about ballots, folded ballots. This is

1 garden-variety election issues which may or may not be true but
2 which is not related in any way at all to the substance of the
3 plaintiffs, including Mr. Davis' lawsuit.

4 THE COURT: I think that is a real concern when I
5 saw -- you know, I've given you some amount of latitude.
6 But -- and there are circumstances that -- where I would allow
7 you.

8 But this -- this really is going towards some of
9 apparently Mr. Favorito's or other's concerns regarding the
10 handling of the Fulton County hand ballots and any review of
11 those. And that has not been an issue in this case and is not
12 the -- does not entail the claims in the case.

13 So, you know, if they want -- if your client or
14 Mr. Favorito wants to bring a separate lawsuit -- and I know
15 that they have in the past -- about that, that is something
16 else.

17 But we have a lot to cover here. And I don't think
18 this is germane.

19 MR. OLES: May I tie it, Judge?

20 The reason that I believe this is relevant is the
21 assertions that these are duplicate ballots. And one of the
22 issues -- and I expect it to come up in Mr. Halderman's
23 report -- is his conclusion that the system does not reject,
24 cannot reject duplicate ballots.

25 So the existence of there being duplicate ballots in

1 this re-count that were revealed I believe is relevant to the
2 issues before this Court.

3 MR. CROSS: No one is challenging the tabulation
4 system. That is what he is talking about. Scanning multiple
5 ballots goes to the tabulation system. That is not a claim in
6 this case.

7 THE COURT: I will let you ask one more question
8 about this, and that is it.

9 BY MR. OLES:

10 Q. Ms. Watson, you said this was open at the time you left.

11 Do you recall whether there was any confirmation by anyone
12 within your office that there were, in fact, duplicate ballots?

13 A. No, not that I'm familiar with.

14 Q. Okay.

15 MR. OLES: All right. Thank you, Judge.

16 MR. CROSS: Your Honor, I should also clarify because
17 I -- what I meant when I said not challenging the tabulation
18 system, we are not challenging the use of scanners.

19 THE COURT: The what?

20 MR. CROSS: When I say we're not challenging the
21 tabulation system, we're not challenging the use of scanners.
22 I just want to be clear on what I meant by that. Thanks.

23 THE COURT: All right. I mean, we have obviously in
24 the case had issues regarding the way -- the scan -- the
25 quality of the scanning. That is not before me at the moment.

1 But -- and that went up -- that question went up to the
2 Eleventh Circuit.

3 But the question of, you know, how scanners fit into
4 the system clearly are part of the system. So I just think
5 that it is more complex than that, from what you just stated,
6 too --

7 MR. CROSS: Thank you, Your Honor.

8 THE COURT: -- but -- and obviously the QR code is
9 giving instructions as to the -- the scanning. So I think that
10 one has to be careful about the way it is described here.

11 I have tried to preserve the opportunity of
12 Mr. Davis' counsel to ask a few questions on this. But I also
13 think what he was getting at was something different.

14 MS. LaROSS: Thank you, Your Honor. Diane LaRoss for
15 the State defendants.

16 DIRECT EXAMINATION

17 BY MS. LAROSS:

18 **Q.** Ms. Watson, do you need a drink of water or can I --

19 **A.** I'm fine.

20 **Q.** Okay. I just wanted to be sure.

21 Okay. Happy to provide it if you need it.

22 You testified already about working for the Secretary of
23 State's office.

24 From when to when did you work for the Secretary?

25 **A.** September of 2013 through November of 2021.

1 Q. And at all times that you worked for the Secretary's
2 office, were you always an investigator?

3 A. I was always in the Investigations Division. I had
4 various roles within that division.

5 Q. And in the Investigation Division that -- you covered
6 elections and the other divisions in the office.

7 Do I understand that correctly?

8 A. We investigated claims for elections, charities,
9 corporations, securities, and the professional licensing
10 boards.

11 Q. And I think you mentioned and am I correct that in
12 June 2019 you became the chief investigator?

13 A. When the previous chief investigator retired, I was the
14 acting until appointed as the permanent, correct. That was in
15 June of 2019.

16 Q. And when you --

17 THE COURT: June of 2019 when you became the acting
18 director?

19 THE WITNESS: Yes. And I was official in October.

20 BY MS. LAROSS:

21 Q. And when you began your work and when you were hired at
22 the Secretary's office, did you bring any law enforcement or
23 investigation experience with you to that job?

24 A. Yes.

25 Q. And what was that, just generally? We don't need all the

1 specifics. If you can speak generally.

2 **A.** Yes. I was certified as a police officer in the state of
3 Georgia in 1986 with the City of Roswell, and I worked there
4 for 29 and a half years, which was prior to the Secretary of
5 State's office.

6 **Q.** And your work with the City of Roswell, was that with the
7 police department for those 29 years?

8 **A.** Yes.

9 **Q.** And for that time, did you serve as an investigator for
10 the Roswell Police Department?

11 **A.** 15 of those years was as an investigator.

12 **Q.** And what is your -- if you could mention your current
13 position?

14 **A.** Assistant deputy commissioner with the Department of
15 Revenue.

16 **Q.** And in your current role, are you still a sworn law
17 enforcement officer?

18 **A.** Yes.

19 **Q.** And were you a sworn law enforcement officer when you
20 became chief investigator of the Secretary's office?

21 **A.** Yes.

22 **Q.** And were you a sworn law enforcement officer at all times
23 you served in the Secretary's office?

24 **A.** Yes.

25 **Q.** And you were asked some questions by counsel concerning

1 Coffee County and a visit that you made to Coffee County in
2 December of 2020. I'm going to ask you just a couple of
3 questions about that.

4 **A.** Okay.

5 **Q.** And why did you go to Coffee County on that occasion in
6 December of 2020?

7 **A.** Coffee County was reporting that they were having
8 difficulty in verifying their election results with their
9 re-count.

10 **Q.** And who also -- who went with you on that visit in
11 December 2020?

12 **A.** Pam Jones, the Macon area supervisor, and Josh Blanchard.

13 **Q.** And was Supervisor Jones -- was she in charge of the
14 meeting in December?

15 **A.** She set the meeting up. I don't know that there was a
16 person that was necessarily in charge.

17 **Q.** Okay. Fair enough.

18 And what all happened at that meeting?

19 **A.** We met with them to discuss how they were doing the
20 re-count and if they were following the correct procedures.

21 **Q.** And what did you find or you and the team find about
22 whether or not Coffee County was following the correct
23 procedures?

24 **A.** The main difficulty was that they were not keeping their
25 batches of ballots separated in the batches, and that they were

1 just clumping them all together and then trying to scan them
2 all in at one time.

3 And so it was difficult when they had a -- an issue with
4 the scanner jamming and whether or not they -- one batch or
5 another was duplicated or was not counted. It was -- they
6 couldn't go back and identify which batch they were having a
7 problem with. And that was their primary --

8 **Q.** And at that meeting, was there a re-count conducted?

9 **A.** By hand.

10 **Q.** And what were the results of the -- of that hand re-count?

11 **A.** It verified their original number.

12 **Q.** So that -- the machine count, was that confirmed as
13 accurate and correct?

14 MR. CROSS: Objection, Your Honor. She has no
15 personal knowledge of this. And it would require expert
16 testimony anyways.

17 MS. LaROSS: I don't think so, Your Honor. To the
18 extent of -- I'm just simply asking for her understanding of
19 what happened at the meeting and what the results of the
20 meeting were. So I'm not asking her to testify as an expert
21 concerning the machine.

22 MR. CROSS: If she rephrases the question to her
23 understanding, there is no objection, Your Honor.

24 THE COURT: Okay.

25 MS. LaROSS: Okay. I'll do so.

1 BY MS. LAROSS:

2 **Q.** So to your understanding at that meeting in December of
3 2020, were you able to confirm that the count that was
4 registered in the machine -- the voting machines was correct
5 and accurate as compared to the hand re-count?

6 **A.** Yes.

7 **Q.** And were there any other issues that -- with Misty Hampton
8 that were raised at that meeting, that you recall?

9 **A.** Yes. The other -- the other thing that was discussed was
10 a video that she had posted online in which she claimed that
11 the machines could be manipulated. Specifically she was asked,
12 because she had made these claims that this could be done, as
13 to whether or not she had actually done any of those -- those
14 things that she claimed could be done. And she said that
15 absolutely not, that she knew that those were violations.

16 **Q.** Counsel also asked you concerning some emails with respect
17 to a Cyber Ninjas business card.

18 Now, did you assign Supervisor Jones to follow up on that
19 issue?

20 **A.** Yes.

21 **Q.** And Supervisor Jones, was she, at all times you worked
22 with her, a certified law enforcement officer?

23 **A.** Yes.

24 **Q.** And I think you mentioned she's supervisor of the Macon
25 office.

1 To your knowledge, was she also a supervisor to
2 Investigator Blanchard?

3 **A.** Yes.

4 **Q.** In your experience working with Supervisor Jones and
5 Investigator Blanchard, did you have any concerns with their
6 ability to handle that investigation?

7 **A.** No.

8 **Q.** And based upon your working experience with them, would
9 you have considered it within their authority to determine
10 what, if any, further investigation was needed after initial
11 steps were taken?

12 **A.** Yes.

13 **Q.** And based upon the email from Chris Harvey that you were
14 asked about when you first learned about the Cyber Ninjas
15 business card, was there anything to alert you that there had
16 been unauthorized access to Coffee County election equipment or
17 the system?

18 **A.** No.

19 **Q.** And in your role as chief investigator, would you consider
20 an elections director finding a business card from Cyber Ninjas
21 to be an indication of an attempted access to the voting
22 system?

23 **A.** That alone, I would not.

24 **Q.** And we understand that you left the Secretary's office in
25 November of 2021.

1 Did you have any knowledge, during your tenure in
2 investigations at the Secretary's office, that there had been
3 an incident of unauthorized access by third parties to Coffee
4 County elections equipment?

5 **A.** No.

6 **Q.** And had you or your team had any indication that that had
7 happened, what would you have done?

8 **A.** I would have ran it up the chain to not only notifying
9 Chris, James, or Michael Barnes, Deputy Fuchs, and Ryan
10 Germany, the Secretary.

11 **Q.** And I'm going to ask you a few questions. You've been
12 asked about the 2020 election.

13 And were you the chief investigator during the 2020
14 general election in Georgia?

15 **A.** Yes.

16 **Q.** And did you receive complaints about the election from
17 supporters of President Trump?

18 **A.** I received complaints from everybody.

19 **Q.** Say it again.

20 **A.** I have received complaints from everybody.

21 **Q.** Okay. Did you receive any threats to you during the 2020
22 presidential election?

23 **A.** Many angry conversations and emails. But no overt threats
24 that I'm aware of.

25 **Q.** Okay. And did you actually speak with President Trump

1 about his allegations about the vote count in Georgia?

2 **A.** I had one conversation with President Trump.

3 **Q.** And are you confident with the results of the 2020
4 presidential election in Georgia?

5 **A.** Yes, I am.

6 **Q.** Those are all the questions I have. Thank you,
7 Ms. Watson.

8 And, of course, thank you for your service to the voters
9 in Georgia and the citizens of Georgia. We appreciate it.

10 THE COURT: Mr. Cross, do you have any redirect?

11 RECROSS-EXAMINATION

12 BY MR. CROSS:

13 **Q.** Ms. Watson, if you could go back to Exhibit 522. It is
14 Tab 6 in the binder.

15 We looked at this a moment ago. On December 10 of 2020,
16 Ryan Germany, the general counsel, alerted you, Chris Harvey,
17 and others in the Secretary's office that Eric Chaney had made
18 completely false statements; right?

19 Right?

20 **A.** What he is saying about us as not helping when asked is
21 completely false.

22 That is what he advised.

23 **Q.** So literally the day before you went into the Coffee
24 County elections office investigating election security
25 concerns, the general counsel had put you on notice you might

1 be dealing with people who are making false statements; right?
2 At the level of the board?

3 **A.** And we were -- we were going to Coffee County to --

4 **Q.** My question is just yes or no.

5 **A.** Ask me the question again.

6 **Q.** The day before you went into Coffee County to investigate
7 election security issues, including a YouTube video where a
8 pass code was put up on the internet, the general counsel had
9 put you on notice that you were potentially dealing with people
10 who had made completely false statements, even at the level of
11 the Coffee County election board?

12 You were on notice of that from your general counsel?

13 **A.** He was advising that his claim that we were not being
14 helpful and we were not responding was not accurate. That's
15 correct.

16 **Q.** And you learned that the day before you met with these
17 folks; right?

18 **A.** Correct.

19 MS. LaROSS: Sorry. What was your question again?
20 She learned that --

21 MR. CROSS: The day before she met with them.

22 MS. LaROSS: That she met with Coffee County -- I
23 don't think it is established that she met with Eric Chaney.

24 MR. CROSS: Okay.

25

1 BY MR. CROSS:

2 Q. Now, can we pull up Exhibit 143?

3 Actually, go back very quickly, if you would, for the
4 context to exhibit -- Exhibit 1. Or sorry, Tab 1, Exhibit 78.

5 Do you see again Mr. Barnes' email passing along the news
6 of the Cyber Ninjas card to Chris Harvey refers to a Dominion
7 email?

8 Do you see that?

9 A. Yes.

10 Q. And Mr. Barnes sent his email on May 7 of 2021.

11 Do you see that?

12 A. Yes.

13 Q. And he writes, the Dominion email today pertaining to
14 Cyber Ninjas was alarming to me.

15 Do you see that?

16 A. Yes.

17 Q. So you knew -- and you're at the top of this thread;
18 right? You read this email?

19 A. Correct.

20 Q. And so you knew when you sent folks in to figure out
21 whether Cyber Ninjas had had contact with the election
22 equipment that the election superintendent there was alarmed by
23 a message that Cyber Ninjas was trying to do exactly that;
24 right?

25 A. I can't say what his thought was.

1 Q. Well, you can read it. He was alarmed? That is what he
2 wrote; right?

3 A. Correct.

4 Q. So alarmed that he raised this to the level of the State
5 election director; right?

6 A. Yes.

7 Q. Were you aware that Mr. Harvey testified in this case that
8 when this came to him the reason he passed it on to you was
9 because it raised what he called his worst fear?

10 A. I'm not aware of that, no.

11 Q. Okay.

12 MR. CROSS: Can we pull up Exhibit 143 real quick?

13 BY MR. CROSS:

14 Q. Take a look at this on the screen, if you would,
15 Ms. Watson.

16 Do you see the day before Mr. Barnes sends his email in
17 invoking Chris Harvey's worst fear, Dominion sent out the
18 customer notification here about maintaining secure chain of
19 custody for your Dominion voting system?

20 Do you see that?

21 A. I do.

22 Q. And Dominion put on notice, which Mr. Barnes found
23 alarming, Dominion has been alerted that customers are being
24 approached with offers or requests to conduct a forensic
25 audit --

1 Forensic audit is in quotes.

2 Do you see that?

3 **A.** I do.

4 **Q.** -- of their voting equipment.

5 Do you see that?

6 MS. LaROSS: Your Honor, I have an objection to
7 reference to this exhibit. There has not been a foundation
8 laid that this witness has knowledge or received this document.

9 MR. CROSS: It is in evidence, isn't it?

10 Yes, this is in evidence.

11 BY MR. CROSS:

12 **Q.** Do you see that?

13 **A.** I do.

14 **Q.** When you were tasked with investigating potential access
15 to the Coffee County voting equipment just five days later,
16 were you aware that Dominion had sent out this notice?

17 **A.** I was not.

18 **Q.** So when you read Mr. Barnes' email saying that he was so
19 alarmed by an alert from Dominion and he finds a Cyber Ninjas
20 card sitting in the office, you didn't think it was important
21 to figure out what Dominion notice had him so upset?

22 **A.** Again, my focus was on whether the complaint of whether
23 Cyber Ninjas had had contact with the county and what that
24 purpose was.

25 **Q.** By May of 2021, it was public knowledge that Cyber Ninjas

1 had attempted to gain access to voting equipment in places like
2 Arizona?

3 Were you aware of that at the time?

4 **A.** I was aware of issues in Arizona. The specifics I was
5 not. I had a full plate of things in Georgia.

6 **Q.** When this email came to you to investigate this, had you
7 never heard of Cyber Ninjas?

8 **A.** I had heard the name. But I didn't know ...

9 **Q.** And you had heard of them in conjunction with getting
10 access to voting equipment in states; right?

11 **A.** No.

12 **Q.** As the head of the Investigations Division, in May of
13 2021, with responsibility for election investigations, you had
14 never heard of them?

15 **A.** I had heard the name Cyber Ninjas. Again, their specific
16 interactions and what they were doing, I did not have that
17 information.

18 **Q.** So let's just be clear, because you testified a moment ago
19 in response to the State's questions, that when you went --
20 when you had your investigators conduct this investigation on
21 May 11, that the only thing you knew about was that there was a
22 Cyber Ninjas card left in the office?

23 Do you remember testifying to that a minute ago?

24 **A.** That is the information that we had.

25 **Q.** Okay. But what you also had was the general counsel had

1 told you months earlier that at least one member of the then
2 sitting election board had made completely false statements?
3 That was in your head too; right?

4 **A.** That he had made false allegations about us being helpful
5 to them or not. That wasn't particularly in my head, no.

6 **Q.** Okay. But you had received Mr. Germany's email?

7 **A.** Correct.

8 **Q.** Okay. You also -- as you testified a moment ago, you also
9 knew that the EMS server, according to Mr. Barnes, was not
10 accessible and Mr. -- according to James Barnes was not
11 accessible and that Michael Barnes was investigating whether
12 there had been access to that? You testified to that earlier,
13 right? So you knew that was happening, too, on a parallel
14 track?

15 **A.** Correct.

16 **Q.** And you knew from the email that Dominion had sent out
17 some kind of warning to the Coffee County -- to the Coffee
18 County election and superintendent that alarmed him about the
19 Cyber Ninjas card?

20 You knew that too; right?

21 **A.** The Dominion correspondence with the counties I was not --

22 THE COURT: That wasn't the question.

23 Go ahead. Ask the question again.

24 MR. CROSS: Thank you.

25

1 BY MR. CROSS:

2 Q. You knew from James Barnes' email that Dominion had sent
3 out some sort of alert to Coffee County raising an alarm for
4 him about Cyber Ninjas being in that office?

5 A. There was reference to Dominion in that email; correct.

6 Q. And I believe you said you did not know that the State had
7 hired a forensic investigator to look at the EMS server? That
8 was not disclosed to you?

9 A. No, it was not -- I'm not familiar with it. I do not
10 recall it.

11 I mean, if they advised me that they did, I do not recall
12 it.

13 THE COURT: Let me just clarify. And you knew that
14 there was a Cyber Ninjas card that was what Mr. Barnes --

15 THE WITNESS: Was reporting, yes.

16 THE COURT: -- James Barnes was reporting?

17 THE WITNESS: Yes.

18 THE COURT: Which would have indicated some form of
19 contact with the Ninjas, wouldn't it?

20 You don't just create your own card.

21 THE WITNESS: You don't just create your own card.
22 But it could have been sent in the mail. Somebody could have
23 left it there when they were there. They could have --

24 THE COURT: Well, that's the point. They could have
25 left it there when they were present in the Coffee County

1 office.

2 THE WITNESS: That was the purpose of the
3 investigator to contact them to find out what their contact was
4 with Cyber Ninjas, if any.

5 BY MR. CROSS:

6 Q. So when your investigators wrote to you on May 11 that
7 they did not yet know whether the Cyber Ninjas or anyone else
8 had had unauthorized access with the voting equipment, you knew
9 all of these things we've talked about? Mr. Germany telling
10 you that Ryan Germany had made -- or that Eric Chaney had made
11 a completely false statement? Mr. Barnes was investigating the
12 EMS server for potential unauthorized access? There was an
13 ongoing investigation into Misty Hampton putting an EMS pass
14 code and a Dominion alert? All of that you knew on May 11;
15 right?

16 MS. LaROSS: I object to the question, Your Honor. I
17 don't believe she testified that she was aware of the Dominion
18 alert.

19 MR. CROSS: It is in the email.

20 MS. LaROSS: It isn't. I don't -- we have a --

21 THE COURT: Well, it says the Dominion email today
22 pertaining to Cyber Ninjas was alarming to me. And she had
23 that.

24 MR. CROSS: Right. Right.

25

1 BY MR. CROSS:

2 Q. So the answer to my question was yes; right? You were
3 aware of all of that on May 11?

4 A. Correct.

5 Q. And you testified that it was within the authority of
6 Pamela Jones and Josh Blanchard to make the determination of
7 whether to do any further investigation on May 11; right?

8 You said that?

9 A. It was my understanding that they were still waiting on
10 the IT department in Coffee County, that that was continuing.

11 Q. I just want to make sure I -- your testimony. The
12 question asked of you: Was it within the authority of Pamela
13 Jones and Josh Blanchard to determine next steps to do anything
14 further?

15 A. Yes.

16 Q. Okay. So do I understand that you, as the head of the
17 Investigations Division, with all of the facts known to you at
18 the time and the broader environment of what was happening in
19 the United States around elections in May of 2021 --

20 A. Uh-huh (affirmative).

21 Q. -- you decided to just send an email that said, thanks,
22 and leave it to your investigators to determine whether
23 anything more was needed?

24 Is that right?

25 A. My understanding was that they were still waiting on

1 Coffee County IT department to see if there was any further
2 information that was there. So my impression is that this was
3 continuing.

4 **Q.** But you never followed up?

5 **A.** Again, without being able to go back and research, I
6 can't, you know, off the top of my head say if there was any
7 further contact with them or not.

8 **Q.** Who made the decision not to do any further follow-up
9 investigation beyond May 11 of 2021?

10 **A.** It was my understanding that it was continuing.

11 **Q.** Investigator Blanchard testified yesterday there was
12 nothing more.

13 Who made the decision to do nothing more?

14 **A.** I did not say not to do anything further.

15 **Q.** Okay. So who made that decision? Investigator Blanchard?

16 **A.** My understanding was that it was continuing. So I did not
17 know that it had not been.

18 **Q.** You keep saying it was your understanding it was
19 continuing. But if you thought it was continuing, wouldn't it
20 be sensible for you to follow up in a few days, few weeks and
21 say, hey, where does this stand?

22 **A.** In --

23 **Q.** Let me ask you this way: Why didn't you follow up if you
24 thought it was continuing, given everything that you knew at
25 the time?

1 **A.** In -- again, if I were there, that may have happened. But
2 I'm not there.

3 **Q.** You can't tell the Court -- you can't give any reason why
4 you decided just to let this go, given everything you knew at
5 the time? No follow-up?

6 **A.** I can't say that I let it go. I can say that at the time
7 I thought that it was continuing.

8 **Q.** Did anyone ever suggest to you that this investigation was
9 not a priority for the office?

10 **A.** No.

11 **Q.** So it was your decision? You made the decision not to do
12 any follow-up with your investigators; right?

13 **A.** Based on the information that I was provided that they
14 were still waiting on additional information, I was waiting to
15 hear back. You know, we had not had any verification that
16 there was any inappropriate access to the machine or that we
17 were able to confirm that there had been any contact with Cyber
18 Ninjas.

19 **Q.** You also testified, just lastly, that you had no knowledge
20 of the breaches that occurred in Coffee County in 2021 before
21 you left the office; right?

22 **A.** I don't recall any additional information that would have
23 alerted me to that, no.

24 **Q.** So just to be clear, as you sit here, is your testimony
25 that you did not know in any way that anyone had gained

1 unauthorized access to any equipment, any voting equipment
2 anywhere in the state of Georgia while you were the director of
3 the Investigative Division?

4 **A.** Unauthorized access?

5 **Q.** Unauthorized access.

6 **A.** Unauthorized access could be an allegation within a county
7 that someone has gone in and done something in a machine that
8 they were not supposed to, as far as somebody having
9 unauthorized access to change a voter registration. So I can't
10 say that there hasn't been unauthorized access into the
11 election system.

12 I can say that I was not familiar with any unauthorized
13 third-party access to fraudulently access the election system.

14 **Q.** And the reason you didn't learn about the breaches that
15 occurred in Coffee County, while you were there, is because on
16 May 11, 2021, when your investigators told you they were still
17 looking into it, the sum total of your follow-up was simply to
18 say, thanks; right?

19 MS. LaROSS: Objection, Your Honor. This has been
20 asked and answered.

21 THE COURT: I think it has been.

22 BY MR. CROSS:

23 **Q.** That was the total of your response?

24 MS. LaROSS: Objection, Your Honor.

25 THE COURT: I think --

1 MR. CROSS: Oh, sorry.

2 THE COURT: I think you've explored that.

3 MR. CROSS: Thank you.

4 EXAMINATION

5 BY THE COURT:

6 **Q.** Did it ever occur to you to direct your investigators and
7 Ms. Jones and Mr. Blanchard meanwhile to call -- to try to
8 contact someone with the Cyber Ninjas?

9 I mean, you had a card. There was a telephone number.
10 There was an email.

11 Did anyone think to even call them, had they been there?

12 **A.** Correct. I -- I did not tell them not to contact them. I
13 do not know if they did or they did not, other than the updates
14 that I have. I did not specifically recall telling them, you
15 know, see if you can get in touch with them or not.

16 **Q.** You were aware that there was an incredible amount of
17 commotion in the nation at that point and in Georgia regarding
18 the election results and how they are handled and including
19 regarding the Cyber Ninjas and that they had a part in that?
20 Did you --

21 **A.** I recall -- I recall hearing the name Cyber Ninjas, but
22 their particular involvement with that I did not know that --
23 those specifics. Again --

24 **Q.** But you knew it was -- they were related to election
25 matters because of the letter that --

1 **A.** Right.

2 **Q.** -- was sent to you; right?

3 **A.** Correct.

4 **Q.** All right. Did you ever talk about this at all with the
5 deputy superintendent who had asked you to go and interview --
6 go deal with Coffee County in December of '20?

7 **A.** Deputy Secretary Fuchs? Is that who you are referring to?

8 **Q.** Well, you had it -- wasn't he copied on this? It was --

9 **A.** James?

10 **Q.** Who wrote you the letter asking you to do it, saying he
11 was very concerned? I don't have the -- where you started off
12 --

13 **A.** Chris Harvey? Is that who you are referring to?

14 **Q.** No. I'm not talking about --

15 THE COURT: Mr. Cross, you began --

16 MR. CROSS: I'm sorry?

17 THE COURT: -- with the letter of December of 2000 --

18 Why she goes down there in the first place. I just
19 need the exhibit number or the tab number.

20 MR. BROWN: 254, David.

21 I believe it is 13, Your Honor.

22 THE COURT: Thank you.

23 No.

24 MR. CROSS: I'm sorry, Your Honor. You're looking
25 for why she goes down there?

1 THE COURT: In December of 2020. She has the
2 interview with them. Mr. Sterling is very upset with the
3 falsehoods in his mind.

4 MR. CROSS: Oh, Mr. Germany's email. Sorry.

5 THE COURT: Mr. Germany.

6 MS. CONAWAY: That is Tab 6.

7 MR. CROSS: Tab 6.

8 THE COURT: Thank you.

9 MR. CROSS: Yes. Thank you. Sorry, Your Honor.

10 BY THE COURT:

11 **Q.** This is from Mr. Germany and he is saying he's very upset
12 about a host of matters that Mr. Chaney mentioned and that they
13 were false.

14 And you go down personally to deal with that. But you
15 didn't manifest any other concern beyond just leaving this
16 matter with -- in May just as is? Never heard about it again?
17 Never resolved it? Never -- there was no -- never looked at
18 whether they had resolved the case and it was closed or how
19 they had resolved it?

20 **A.** Right. With the -- with the response back, my
21 understanding is that they were still waiting on information,
22 so ...

23 **Q.** That was the end of your follow-up though; right? That
24 is, as I understood your testimony?

25 **A.** That is the last that I got from it that I'm familiar

1 with.

2 **Q.** When did you discover, in fact, if you ever discovered,
3 that Mr. Logan and his colleague Mr. Lenberg had, in fact, been
4 in the Coffee County election headquarters on January 18, 2021?

5 **A.** In the news after I had already left the Secretary of
6 State's office in November.

7 **Q.** Who did you report to?

8 **A.** Deputy Secretary Fuchs.

9 **Q.** And did you ever discuss this with the deputy secretary?

10 **A.** We did -- we did have regular discussions. But I don't
11 specifically -- you know, I can't say, you know, I recall a
12 specific time of having a conversation.

13 **Q.** Were you at all involved in renumbering or reclassifying
14 the dates of different investigations relating to Coffee
15 County?

16 **A.** The what?

17 **Q.** I think that there was some consolidation and also changes
18 of dates of the sort of what they were associated -- various
19 investigations associated with Coffee County.

20 Were you involved with that at all?

21 **A.** Changing dates, I don't know --

22 THE COURT: Okay. Thank you.

23 THE WITNESS: -- about ...

24 MR. CROSS: Could I ask just literally one question,
25 Your Honor?

1 THE COURT: Is it related to one of the matters I
2 raised?

3 MR. CROSS: Yes.

4 THE COURT: All right.

5 RE CROSS-EXAMINATION (Further)

6 BY MR. CROSS:

7 Q. Just one question, Ms. Watson.

8 Is it your position that your investigators, including
9 Blanchard and Jones, that they lack the skill or training
10 needed to uncover the Coffee County breaches on their own in
11 the summer of 2021 or at any point?

12 A. No, I'm not saying that.

13 Q. Okay. Thank you.

14 THE COURT: May this witness be excused?

15 MS. LaROSS: Yes, Your Honor. Thank you.

16 THE COURT: Thank you very much. Please don't
17 discuss your testimony with anyone until the conclusion of the
18 trial. I appreciate that.

19 THE WITNESS: Yes.

20 THE COURT: We'll start at -- at 1:15. Take a lunch
21 break until then.

22 Thank you.

23 COURTROOM SECURITY OFFICER: All rise. Court is in
24 recess until 1:15.

25 **(A lunch break was taken.)**

1 THE COURT: Please have a seat.

2 Would you call your next witness.

3 Mr. Cross, do you want to call your next witness?

4 MR. CROSS: Yes.

5 Christian?

6 MR. ANDREU-VON EUW: We call Dr. Alex Halderman.

7 COURTROOM DEPUTY CLERK: Please raise your right
8 hand.

9 **(Witness sworn)**

10 COURTROOM DEPUTY CLERK: Please have a seat. If you
11 would, state your name and spell your full name for the record.

12 THE WITNESS: My name is Alex Halderman. That is
13 A-L-E-X, H-A-L-D-E-R-M-A-N.

14 THE COURT: All right. Before we begin with your
15 testimony -- thank you very much -- good to see you again.

16 I don't remember whether the report is part of the
17 exhibits or not.

18 MR. CROSS: It is in evidence, Your Honor.

19 THE COURT: What is the -- do you have it so that I
20 can refer to it to the extent that I might need to?

21 MR. CROSS: Yes.

22 MR. TYSON: And, Your Honor, just to clarify for the
23 record, I believe the report is in evidence for a limited
24 purpose, not for all purposes, and it is the redacted version,
25 not the unredacted version.

1 THE COURT: That is fine.

2 MR. TYSON: Thank you.

3 THE COURT: Secondly, this -- this witness is Curling
4 Plaintiffs -- is retained counsel by the Curling Plaintiffs; is
5 that right?

6 MR. CROSS: Retained as an expert, yes, Your Honor.

7 THE COURT: Right.

8 MR. CROSS: Yes, Your Honor.

9 THE COURT: And so, accordingly, also, I mean,
10 obviously, Dr. Halderman's work has played a seminal role in
11 this case, but I want to just be clear that we are only going
12 to have one attorney be asking him questions from the
13 plaintiffs' side.

14 MR. CROSS: Okay.

15 MR. BROWN: That's correct, Your Honor.

16 THE COURT: And that is your -- the people from your
17 team.

18 Is your colleague going to be asking all the
19 questions, or are you going to be asking any of them?

20 MR. CROSS: Christian is going to ask all the
21 questions.

22 MR. OLES: Judge, does that include Mr. Davis as
23 well?

24 THE COURT: That's right. It includes -- this is the
25 witness -- the consulting -- the expert witness on behalf of

1 the Curling Plaintiffs. He has developed all -- I mean, it is
2 very complex testimony. They have worked with him. It would
3 be really a -- not fair or appropriate for any other of the
4 plaintiffs' counsel then to sort of take over and do some
5 other -- try to elicit other issues from Dr. Halderman because
6 he is going to be testifying about what is in the report, not
7 about other matters.

8 MR. OLES: I respect -- I respect what Your Honor had
9 to say.

10 For the record, I would like to lodge my objection
11 that I did have about four questions.

12 **(There was a brief pause in the proceedings.)**

13 THE COURT: What the counsel said, he had about -- he
14 objected, he had about four questions.

15 And this sort of goes to the whole issue of -- you
16 can come up -- if you have a small number of questions like
17 that, then what I encourage you to do is to consult with
18 plaintiffs' counsel about your questions so that they can ask
19 them on your behalf.

20 And if you have follow-up, you know, you're welcome
21 to sit up closer for the period of time that your questions are
22 being asked in case there is follow-up.

23 But, you know, I think that what I've tried to
24 encourage as much as possible is that you confer with your --
25 with plaintiffs' other counsel regarding where they are going

1 with something because it is simply not appropriate for you to
2 go off into a whole other set of theories that have not been,
3 in fact, litigated or advanced in this case by present counsel
4 and/or addressed by the Court's prior rulings.

5 So, I mean, I've tried to be as flexible as possible
6 in allowing you to pursue things, but I think this is such a
7 refined area. And enormous amounts of time have been devoted,
8 both by Dr. Halderman and plaintiffs -- the Curling counsel.

9 So if there is something that you want to be followed
10 up, talk with Mr. Cross and his colleague here. And then if
11 you have a concern afterwards, we'll address that. You can
12 come up to the bench and explain what you wanted to raise that
13 they wouldn't raise for you. Okay?

14 MR. OLES: I will certainly endeavor to do that,
15 Judge. I would respectfully say, for the record, my prior
16 efforts have met with threats. Okay? Thank you.

17 MR. CROSS: What?

18 I have no idea what that means or who it involves. I
19 think we can just move on.

20 THE COURT: All right.

21 MR. CROSS: Your Honor, we have a copy of the public
22 version of the report for you. My understanding is we do not
23 have questions that will relate to the redacted portions.

24 If the State does, we can make that available.

25 THE COURT: Would you restate that for the court

1 reporter.

2 I just -- I want to remind everyone to speak into the
3 microphone.

4 So restate what you just stated.

5 MR. CROSS: Sorry. So what you have is the public
6 version of the report. It has got some modest redactions. We
7 don't anticipate any questions that would require Your Honor to
8 reference the unredacted version.

9 If you want it, we can provide that. But that is
10 still under seal.

11 THE COURT: All right. Thank you.

12 MR. ANDREU-VON EUW: Shall I proceed, Your Honor?

13 THE COURT: Yes. Thank you.

14 Whereupon,

15 J. ALEX HALDERMAN PH.D.,

16 after having been first duly sworn, testified as follows:

17 DIRECT EXAMINATION

18 BY MR. ANDREU-VON EUW:

19 **Q.** Good afternoon, Dr. Halderman. My name is Christian
20 Andreu-Von Euw. I'm here on behalf of plaintiffs.

21 **A.** Good afternoon.

22 **Q.** What do you do for a living, Professor Halderman?

23 **A.** I'm the Bredt Family Professor of Computer Science and
24 Engineering at the University of Michigan.

25 **Q.** What are your primary academic focuses?

1 **A.** My work is about computer security and privacy. I deal
2 with the security of internet-connected systems, cryptography
3 with cybersecurity, computer forensics. And for the past 15
4 years or so, another large fraction of my work has been about
5 the security of election infrastructure.

6 **Q.** And what do you teach?

7 **A.** I teach computer security at the undergraduate and
8 graduate levels. I created Michigan's undergraduate security
9 curriculum. I also teach courses about election security,
10 including a Coursera massive online course that has been widely
11 used by election officials.

12 **Q.** Thank you.

13 Can you briefly summarize your educational background?

14 **A.** I have three degrees in computer science from Princeton
15 University.

16 **Q.** Those are bachelor's, master's, and doctorate?

17 **A.** That is right.

18 **Q.** Can you give us some of the highlights of your published
19 work on election security?

20 **A.** Sure. I was part of the -- excuse me. I was part of the
21 first university team to do a hands-on security analysis of a
22 U.S. voting machine that the analysis found significant
23 security problems. I have done security analyses of election
24 systems used not only in the U.S. but in Australia and Estonia
25 and India.

1 I more recently conducted human subjects tests of voter
2 verification performance in a peer-reviewed study that won a
3 major award.

4 And in 2020, I published another peer-reviewed study that
5 was a forensic investigation of an election incident that
6 occurred in Antrim County, Michigan, in 2020. And that was
7 based on work that I conducted for the Michigan Attorney
8 General and Secretary of State.

9 **Q.** Do you ever work with election officials on election
10 security?

11 **A.** Yes. Yes, I do. I was part of a team in 2007 that the
12 California Secretary of State assembled of leading election
13 security experts to conduct top-to-bottom source code review
14 and security study encompassing all of California's polling
15 place equipment.

16 More recently, the Michigan Secretary of State and
17 Attorney General brought me into investigate problems that
18 occurred during the 2020 election in Antrim County and to
19 understand those problems and make recommendations about how to
20 avoid a recurrence in the future.

21 I've also -- I have also been contracted to advise the
22 Secretary of State of Louisiana about the security of that
23 state's election equipment, including its Dominion equipment.

24 I should add that in Antrim County, Michigan, the
25 equipment involved was the same Dominion Democracy Suite system

1 that is used in Georgia except that the BMDs there were all
2 used for accessibility.

3 **Q.** Thank you.

4 Have you ever been asked to testify before Congress?

5 **A.** I have. I have testified to Congress twice about election
6 security matters, including to the Senate Intelligence
7 Committee.

8 **Q.** Can you turn to Tab 1 in your binder, please?

9 **A.** I am sorry. I don't have my binder. This is the Frances
10 Watson binder.

11 MR. ANDREU-VON EUW: One second, Dr. Halderman.
12 We'll come back to that.

13 BY MR. ANDREU-VON EUW:

14 **Q.** In this case, Dr. Halderman, what were you asked to do?

15 **A.** The Curling Plaintiffs asked me to examine the security of
16 Georgia's election system, including the BMD hardware, in order
17 to understand the vulnerabilities in that system and the risks
18 and to help inform the Court about how those risks might impact
19 individual voters and elections in the future.

20 **Q.** Were you asked anything about Georgia's general security
21 processes?

22 **A.** General election security processes? Yes. I considered
23 the security practices that are in place, defenses. I wanted
24 to -- I was asked to understand how the equipment might be
25 attacked or what threats it might face in the real world.

1 Q. Thank you.

2 I'll just wait a second for counsel to get a copy of your
3 binder, and then I'll ask you a question.

4 Can you turn to Tab 1 of your binder, please,
5 Dr. Halderman?

6 A. Yes.

7 Q. Do you recognize that document?

8 A. This is my CV.

9 Q. Does it accurately reflect your educational and
10 professional accomplishments to date?

11 A. Yes.

12 MR. VON EUW: I would like to move the CV into
13 evidence.

14 MR. TYSON: No objection.

15 THE COURT: It is admitted.

16 BY MR. ANDREU-VON EUW:

17 Q. So turning back to your tasks in this case, Dr. Halderman,
18 what were you given to evaluate the -- Georgia's ballot-marking
19 device?

20 A. The Curling Plaintiffs provided a ballot-marking device
21 and an optical scanner that the Court allowed them to receive
22 from Fulton County.

23 Q. Have you provided anything beyond a ballot-marking device
24 and a scanner?

25 A. I was also provided accessories for that equipment

1 necessary to operate an election, assorted memory cards, data
2 files, et cetera.

3 **Q.** Do you see the Dominion ICX BMD you were given here in
4 court?

5 **A.** Yes. It is right here.

6 **Q.** Right in front of you, sir?

7 **A.** Yes.

8 **Q.** What did you do to determine if this ballot-marking device
9 had vulnerabilities?

10 MR. TYSON: Your Honor, at this point I'll object. I
11 believe Dr. Halderman can testify to this, but he has not been
12 qualified as an expert at this point.

13 I would request to voir dire him before he gets into
14 his opinions.

15 THE COURT: All right. Is there more you would like
16 to do to elicit information regarding his expertise?

17 MR. ANDREU-VON EUW: No, Your Honor. I think we have
18 sufficient information.

19 THE COURT: All right.

20 MR. TYSON: Your Honor, could I request specifically
21 what the boundaries of what Dr. Halderman is being offered as
22 an expert in?

23 MR. VON EUW: Dr. Halderman is being offered as an
24 expert in election security -- or election devices, and more
25 specifically, the security thereof and the security of election

1 systems.

2 THE COURT: I'm sorry. Before you speak, I think it
3 looked like Mr. Cross had something he wanted to add.

4 MR. CROSS: I was just going to say, just because
5 Christian hasn't lived through this case, Your Honor has
6 certified him as an election security expert before, so the
7 objection has long since been waived. So I'm trying to
8 understand where we are.

9 MR. TYSON: Your Honor, this is the first time we
10 have been at trial in this case, and I think Dr. Halderman,
11 under the rules, needs to be qualified as an expert to testify
12 here in trial.

13 MR. CROSS: That's not how it works. He's offered
14 testimony in this case in three different live hearings. Not
15 once -- I don't think they have ever objected. I think Your
16 Honor has certified him.

17 The idea that now he is no longer an expert
18 doesn't -- they have given this up. This has long since been
19 waived unless they are going to say that something has happened
20 to him between the last verification that renders him no longer
21 an expert.

22 THE COURT: Well, I think it is certainly strong
23 evidence of that, but I want to allow the defense counsel to
24 make his record.

25 MR. CROSS: Okay.

1 THE COURT: If there is anything after the questions
2 has been asked, of course, that plaintiffs' counsel wish to do
3 to clarify or rehabilitate anything, you are welcome to do
4 that.

5 I would -- Christian, I would like you just to tell
6 me so that I know what I'm calling -- what you go by in your
7 last name -- because it is a hyphenated, long name, I want to
8 know what would be best to ask you when I'm referring to you,
9 which I feel like I will have to do and not just by plaintiffs'
10 counsel.

11 MR. ANDREU-VON EUW: Your Honor, first, Christian is
12 fine, but Mr. Andreu will work as well.

13 THE COURT: Mr. Andreu. Okay.

14 MR. CROSS: This is why I called him Christian, Your
15 Honor.

16 THE COURT: Okay. Well, but I don't call the rest of
17 you by your first name, so I'm not going to do that.

18 But, you know, if you want -- if I need to do the
19 whole thing, Christian Von Euw, is it?

20 MR. ANDREU-VON EUW: I rarely say my whole name, Your
21 Honor.

22 THE COURT: That's fine. That's my question for the
23 day.

24 One other question: My understanding -- but if it is
25 not correct, you should address it as you deem appropriate --

1 is that when you say that you're offering Dr. Halderman as an
2 expert in election system security, are you embracing within
3 that software security?

4 MR. ANDREU-VON EUW: Yes.

5 THE COURT: As well as equipment security?

6 MR. ANDREU-VON EUW: The equipment, the protection of
7 the equipment, the software, everything inside it.

8 THE COURT: Okay. Is there anything else within
9 that, Dr. Halderman, that you think you should specifically
10 flag for purposes of clarity?

11 THE WITNESS: Excuse me, Your Honor.

12 Specifically within?

13 THE COURT: Well, that you are offered for -- as an
14 expert for -- with respect to election devices, election system
15 security. I asked about software with security, and you said
16 yes.

17 And I didn't know if there was something else within
18 that that you consider as embraced within that or that needed
19 to be specifically identified that they agree with, obviously.

20 THE WITNESS: Thank you, Your Honor.

21 Perhaps the cybersecurity and forensic aspects of
22 election systems.

23 MR. ANDREU-VON EUW: Also, Your Honor, to be clear,
24 when I said election system security, that included physical
25 security to the extent that wasn't clear.

1 THE COURT: You're getting very soft.

2 MR. ANDREU-VON EUW: Excuse me.

3 THE COURT: That's all right. I heard it, but just
4 warning.

5 Cybersecurity and forensics elements of election
6 security, as I understood what you were saying.

7 MR. ANDREU-VON EUW: Dr. Halderman?

8 THE COURT: Dr. Halderman, yes.

9 THE WITNESS: Yes.

10 THE COURT: Yes. Okay.

11 And there was one thing you added?

12 MR. ANDREU-VON EUW: Yes. Within election security
13 system, that includes physical security.

14 THE COURT: And do you agree with that,
15 Dr. Halderman?

16 THE WITNESS: Yes.

17 THE COURT: Thank you.

18 VOIR DIRE EXAMINATION

19 BY MR. TYSON:

20 **Q.** Good afternoon, Dr. Halderman.

21 **A.** It is nice to see you again, Mr. Tyson.

22 **Q.** Good to see you as well. It is a little bit warmer in
23 Georgia than I think it was in Michigan last week when we
24 were -- or week before when we were together.

25 Dr. Halderman, do you have any specialized training in the

1 analysis of risks outside of the context of cybersecurity?

2 **A.** No. My training is in cybersecurity.

3 **Q.** Do you have any specialized training regarding the
4 administration of elections in Georgia?

5 **A.** No. Although I've reviewed election training material for
6 elections in Georgia.

7 **Q.** And in forming your opinions or the areas of discussion in
8 this case, did you rely on the functioning of the malware that
9 you designed in your expert capacity?

10 **A.** Can you repeat the question?

11 I'm not sure I understood.

12 **Q.** Certainly. In forming the opinions, your expert opinions
13 in this case, was one of the things that you relied on the
14 malware that you designed and put on to the Dominion
15 ballot-marking devices?

16 **A.** I would -- I would say no. The malware is a -- the
17 malware is a way of confirming and demonstrating the results
18 that I relied on with my testing.

19 MR. TYSON: So, Your Honor, at this time, we would
20 not object to Dr. Halderman testifying as an expert in
21 cybersecurity. We would object to any expert testimony
22 regarding the administration of elections in Georgia.

23 And at this time, we would also renew our prior
24 objection based on Rule 26 for lack of disclosure regarding the
25 malware and the software involved in Dr. Halderman's opinions.

1 And as we discussed, we provided a sealed declaration
2 to you and plaintiffs' counsel furthering the basis for that.

3 We understand the Court has ruled previously on this
4 issue. But for purposes of perfecting the record, we wanted to
5 renew our objection before Dr. Halderman began offering
6 opinions.

7 THE COURT: All right. I will note for the record
8 that I received your sealed additional memorandum only today,
9 and, as agreed, I was not going to look at it until -- unless
10 you were actually offering it formally. So I have not, and I
11 can't really address that.

12 MR. CROSS: Your Honor, just to respond to the
13 Rule 26 objection, couple of quick points. One, that objection
14 was waived. So in the pretrial order, we identified the voting
15 equipment as Exhibit 487.

16 Your Honor might recall that what got us back to the
17 issue of them needing access to some of Dr. Halderman's source
18 code -- or to his source code, I guess, in general, was the
19 idea that when they saw that Exhibit 487 was there with the
20 equipment, they said, oh, it looks like you're going to do a
21 demonstration in court. We said, yes, that is the plan. They
22 said that's the reason they suddenly needed access to the
23 source code.

24 They do not have a Rule 26 objection to Exhibit 487,
25 even though they knew it was coming in for a demonstration, so

1 the objection is waived, first and foremost, Your Honor.

2 I'll also just note, Your Honor, of course, recalls
3 we also told them again on January 9th when we were going to do
4 a demonstration with Mr. Schoenberg, we were going to do this.
5 There was no Rule 26 objection or any objection, as I recall,
6 to Mr. -- Dr. Halderman doing a demonstration.

7 Your Honor may recall we learned about a case from
8 them just this morning. State's counsel left out some
9 important parts of that decision, Your Honor.

10 First and foremost, the Court there, while it does
11 discuss about --

12 THE COURT: What is the name --

13 MR. CROSS: Oh, I'm sorry.

14 THE COURT: For the record, can you tell us the name
15 of the --

16 MR. CROSS: Yes, Your Honor.

17 This was the case Mr. Tyson cited, *Estate of Thompson*
18 *v. Kawasaki Heavy Industries*, and the citation is -- looks like
19 291 F.R.D. 297, and it is out of the District of Iowa in March
20 of 2013.

21 What Mr. Tyson did not share this morning is that the
22 court, over the objection that the demonstrative for expert
23 purposes was untimely, allowed the demonstrative to go in. To
24 the extent there was even an issue, it was justified or
25 harmless.

1 And what the court also says, Your Honor, is, there
2 is no controlling authority on whether disclosure of
3 demonstrative -- which is in quotes -- demonstrative aids is
4 required pursuant to Rule 26(a)(2)(B)(3), and, in fact, it is
5 not. When you look at the plain text of Rule 26 that they are
6 citing, it is exhibits, not demonstratives. Exhibits that will
7 be used to summarize or support them, that has to be given at
8 the time of the report, which makes sense because that is
9 something we would seek to put into evidence.

10 Lastly, Your Honor, we did have some time, despite
11 learning about this just this morning, to take a quick look. I
12 say we, the team.

13 Two decisions we would direct your attention to, Your
14 Honor, that I just got over the lunch break. One is *SFF-TIR,*
15 *LLC v. Stephenson*. It is in the District of Oklahoma, June of
16 2020. And I have a Lexis cite, 2020 US District Lexis 98418.

17 Similarly there, there was an objection about
18 demonstratives being used with an expert, Your Honor. In fact,
19 it was 54 demonstratives that were sought to be used at trial,
20 so something quite substantial beyond what we're talking about
21 here.

22 Again, the Court allowed it, and the reasoning holds
23 here. The Court points out that the defendants' demonstrative
24 exhibits, 54 undisclosed demonstratives were permissible
25 because they were based -- they were not based on undisclosed

1 expert opinion, which, as you will see, is going to be the same
2 here. They were based on admissible evidence, and they were
3 based on -- the substance of them already had been disclosed in
4 the expert report.

5 And so, essentially, what you'll see -- and this is
6 at star 69 to star 70 in the Lexis cite -- the Court finds that
7 the demonstratives themselves did not have to be disclosed
8 because they were simply another way to capture the analysis
9 and the opinions and the testimony that would come out, and
10 Your Honor will see that today in the trial.

11 And then at star 71, 72 the Court says, the
12 demonstrative exhibit is based on facts in the record, and thus
13 the court will not exclude the exhibit.

14 And you will see today that the same is true.

15 The second opinion, Your Honor, *PHT Holding I* -- I
16 think that's an "I" -- *LLC v.* -- it is *SEC.Life of Denver*
17 *Insurance Company*. This is out of the District of Colorado in
18 February just last year. In this one --

19 THE COURT: What is the citation?

20 MR. CROSS: Oh, sorry, yes. It is another Lexis
21 cite. 2023, and the Lexis number is 145942.

22 Here, the demonstratives actually went further than
23 what we have been talking about. The expert came in with
24 demonstratives that, quote, do not merely update schedules
25 previously disclosed to account for reasonably produced data.

1 They present new opinions.

2 So this is far beyond anything we're talking about
3 here. As you'll hear from Dr. Halderman, he's simply going to
4 have a demonstrative that demonstrates his analysis and his
5 opinions. Here, it was something entirely new, new opinions.

6 The court nonetheless allowed it and emphasized that
7 the court has to look at whether there's prejudice, whether it
8 is harmless. And it says, even if to the extent the plaintiffs
9 should have disclosed the data in this format earlier pursuant
10 to Rule 26(a)(2)(B)(3), the failure to do so is harmless.

11 We have not found any decision, nor has the State
12 cited any decision, where a demonstrative was excluded under
13 Rule 26. And again, Your Honor, the objection is long since
14 waived.

15 And let me hand up copies of the decisions so Your
16 Honor has them.

17 THE COURT: Thank you.

18 MR. CROSS: Sorry. We had to compile this very
19 quickly in the meeting room.

20 And for reference for Your Honor, the initial waiver
21 of the Rule 26 is at Docket 1728.

22 THE COURT: And this is one of the cases --

23 MR. CROSS: Oh, there should be -- sorry.

24 I only have one copy of each.

25 THE COURT: That's fine.

1 MR. CROSS: So I was referencing the pretrial order
2 Docket 1728. It is Page 206 of 847 on the docket pagination.
3 It is Page 152 of the PDF. And again, it is Exhibit 487, and
4 there is no objection under Rule 26.

5 THE COURT: You're back.

6 **(There was a brief pause in the proceedings.)**

7 THE COURT: Go ahead.

8 MR. TYSON: If I could respond briefly, Your Honor.

9 THE COURT: Yes.

10 MR. TYSON: To the waiver point, just to briefly
11 recap, we had previously requested the underlying data
12 underlying Dr. Halderman's opinions in this case earlier. As
13 the Court will recall, we had several discovery dispute
14 documents about that, ultimately allowed to wait for ruling on
15 those until after summary judgment because our key was going to
16 be dealing with this at trial.

17 We also filed a motion in limine regarding this
18 issue. And to Mr. Cross' point that the pretrial order somehow
19 waived this issue on Page 2 of Docket 1728, we clearly
20 indicated that this motion regarding Dr. Halderman's data was
21 still pending at the time of the entry of the pretrial order,
22 so there was no waiver.

23 As the Court will recall, there was some additional
24 new software disclosed at the beginning of trial, and that led
25 to an additional review on Monday of this week.

1 Mr. Persinger's declaration was prepared immediately after that
2 to summarize the issues.

3 So we would submit that as a matter not of the
4 demonstrative issue but as a matter of Rule 26 disclosure,
5 since we did not receive the underlying data and the malware,
6 that Dr. Halderman should not be able to offer opinions on
7 that.

8 Ultimately, I think if the malware is nothing but a
9 demonstrative, then it is not evidence before the Court. If it
10 is substantive evidence, then --

11 THE COURT: Well, he's going to be testifying about
12 the malware.

13 MR. TYSON: Well, then Rule 26 would apply, I think,
14 at that point, Your Honor. We would request that Dr. Halderman
15 be limited on that point.

16 THE COURT: All right. Is there any other further
17 reply that you would like to give?

18 MR. CROSS: Yes, Your Honor.

19 As Mr. Tyson just acknowledged, they made a decision
20 to wait to ask for this for trial. This is the worst kind of
21 gotcha game. If Your Honor were not to allow this, you would
22 set a precedent where a party can deliberately decide not to
23 pursue something in discovery that they asked for, and then
24 when you get to trial say, you should have voluntarily produced
25 this, affirmatively produced it even though we didn't follow

1 up. We told the Court and you we didn't want it until trial.
2 Because you didn't give it to us until the timing in which we
3 asked for it, now you keep it out.

4 To the waiver point, Your Honor, Mr. Tyson's only
5 response to the waiver point is to say, well, they had filed a
6 motion in limine on his testimony. The motion in limine has
7 nothing to do with the demonstrative. In fact, the motion in
8 limine is premised on us doing a demonstrative.

9 Because this is how it played out. They told Your
10 Honor in a hearing -- or in a pretrial conference in November
11 of last year that the only reason, the reason they were asking
12 for this discovery, is because they saw a demonstrative. And
13 they said if we don't do the demonstrative that might resolve
14 it. We offered that as a compromise. We said we will not do
15 the demonstrative. We can go forward and the parties don't
16 have to spend time and effort on this discovery.

17 They then did a complete reversal and said no, no,
18 no; even if you do the demonstrative, we still want this.

19 Point being, the whole premise of them filing the
20 motion in limine was to say they are going to do a
21 demonstrative; therefore, we're entitled to this discovery. If
22 we don't get that discovery, his testimony should not come in.
23 It was never a discovery motion about doing a demonstrative.
24 It was always accepted he was doing this, and so the Rule 26
25 objection has long since been waived.

1 Lastly, Your Honor, Dr. Halderman did not say the
2 malware is not a demonstrative. He said he is not relying on
3 it for his opinions. But it is an input. It is something he
4 has considered. And it is highly valuable for the Court to
5 demonstrate that his opinions, contrary to what Secretary
6 Raffensperger has said, are, in fact, real world because he
7 will show you with this equipment from Fulton County,
8 configured as it is used in elections, exactly how someone
9 could walk into a voting booth in minutes, upload that malware,
10 and change elections.

11 So this is directly responsive to their defense in
12 this case that he is talking about something that can't be done
13 in the real world.

14 THE COURT: Okay. Well, thank you.

15 Consistent with my representation to counsel who were
16 directly involved in this and who had signed the
17 confidentiality agreement as to the review of the malware also,
18 I'm going to at this point move forward.

19 I'll look at the motion. I hadn't because I told you
20 I wasn't going to look at it unless you told me it was still a
21 live matter. I can't really be on the bench and be doing more
22 than having a cursory review of the decisions that are now
23 being presented, but --

24 So I think that wisest thing is to move forward.
25 We'll issue an order -- a written order since it is a matter of

1 some concern on the part of the defendants. But I think given
2 how long this case has been going on and the difficulty of
3 getting any case to trial and moving through trial, it is
4 important to go ahead with his testimony at this point.

5 And to the extent that I rule in favor of the
6 defendants' motion or restrict some evidence, it will be
7 articulated at a subsequent -- in a subsequent order.

8 BY MR. ANDREU-VON EUW:

9 **Q.** Dr. Halderman -- I'll move the microphone closer to myself
10 and then ask you a question.

11 Dr. Halderman, focusing on the ballot-marking device, what
12 did you do to determine if it had vulnerabilities?

13 **A.** Yes. So I applied a methodology called open-ended
14 vulnerability testing. This is an established methodology
15 within the election security field for trying to understand at
16 the security posture of a piece of election equipment.

17 And what that consists of is first taking the software in
18 the device apart to understand its functionality and potential
19 vulnerabilities, then forming hypotheses about how those
20 vulnerabilities might be exploited, and then confirming those
21 hypotheses with experiments based on the data.

22 It is essentially a way of playing the role of an attacker
23 and trying to discover ways to compromise the equipment.

24 And, in general, this methodology considers the equipment
25 as it would be used in a real election and tries to find

1 vulnerabilities that would apply in that context.

2 **Q.** Dr. Halderman, you said -- you mentioned taking the
3 software apart. I want to make sure that was clear.

4 Did you receive any source code for this device?

5 **A.** No, I did not. This was what is known as black box
6 testing. That is a testing methodology that doesn't benefit
7 from access to source code.

8 So it is certainly more work for the analyst. There is
9 maybe more of a chance that the analysis will fail to find
10 certain vulnerabilities.

11 But on the other hand, it is perhaps a clearer view into
12 what a real attacker without access to source code could also
13 discover.

14 **Q.** Putting aside source code, did you receive any -- any
15 software for this ballot-marking device other than the software
16 that was loaded inside the machine?

17 **A.** I also received a copy of the version 5.5.10.32 software's
18 update that Georgia applied in the fall of 2020.

19 **Q.** Okay. Did you ever open up the ballot-marking device?

20 **A.** No. At no point did I open its chassis.

21 **Q.** And this is the -- are you aware if this ICX device in
22 front of you -- if this type of device is publicly available?

23 **A.** Well, Dominion doesn't sell them, to my knowledge, to
24 anyone who isn't a municipality. However, ICX --

25 THE COURT: You mean a municipality or a governmental

1 entity?

2 THE WITNESS: Yes, a governmental entity. Thank you.

3 However, an ICX was sold publicly on eBay within the
4 last two years. It was purchased, in fact, by Harri Hursti who
5 is an election security expert who has previously testified in
6 this case.

7 And that ICX had been previously used in the State of
8 Michigan.

9 BY MR. ANDREU-VON EUW:

10 **Q.** Have you personally seen that device?

11 **A.** I have.

12 **Q.** Do you know if anybody else has seen the device, the ICX
13 BMD that Harri Hursti purchased?

14 **A.** Well, yes. So Mr. Hursti runs an annual event called The
15 Voting Village, which is part of DEF CON, one of the world's
16 largest annual hacker conferences. And Mr. Hursti this past
17 year in 2023 brought the ICX that he purchased to DEF CON and
18 made it available to attendees to perform testing on.

19 **Q.** Turning back to your findings, Dr. Halderman, were your
20 findings reviewed by any Government agencies?

21 **A.** My findings in this case, yes. So from when I first
22 discovered the vulnerabilities, I thought it very important to
23 make sure this information was taken through what is known as a
24 responsible disclosure process.

25 That is a process that would get the information into the

1 hands of parties responsible for the design and operation of
2 the equipment.

3 And so in -- I believe it is January 2022, the Court
4 authorized the Curling Plaintiffs to send my report to CISA,
5 the Cybersecurity and Infrastructure Security Agency. It is
6 the arm of the Department of Homeland Security that is
7 responsible for critical infrastructure and election security.

8 And I worked with CISA through its coordinated
9 vulnerability disclosure program to take the information
10 through responsible disclosure.

11 **Q.** Can you turn to Tab 2 in your binder, please?

12 **A.** As I'm looking at Tab 1, I remember one more important
13 thing about my background that I neglected to say, which is
14 that I also work as the -- I am also the co-chair of Michigan's
15 Election Security Advisory Commission by appointment of our
16 Secretary of State.

17 And I wouldn't want my friends at the Michigan Bureau of
18 Elections, who I talk to about that topic almost every other
19 week, to be angry at me for omitting them.

20 **Q.** Thank you, Dr. Halderman.

21 **A.** Tab 2.

22 **Q.** Tab 2.

23 Do you recognize that document?

24 **A.** Yes.

25 **Q.** What is it?

1 **A.** So this is a public vulnerability advisory that CISA
2 produced after the coordinated vulnerability disclosure process
3 was complete.

4 **Q.** So was this the end result of your disclosure to CISA?

5 **A.** That's --

6 MR. TYSON: Your Honor, objection. I just want to be
7 clear for the record that as to this portion, I don't believe
8 Dr. Halderman has a report covering CISA and its
9 recommendations.

10 So as to this portion of his testimony, I think he
11 can only testify as a fact witness, not as an expert.

12 THE COURT: Well, I don't know that that is so,
13 frankly. He might not be an expert on the CISA advisory
14 process. But he -- certainly, given the scope of his
15 qualifications in cybersecurity and his active role as an
16 advisor to the Government, it would certainly -- it would seem
17 he would have the expertise to be able to discuss the advisory
18 opinion even if he can't -- and the opinion process even if he
19 can't act as a representative of CISA itself.

20 So proceed with that understanding.

21 BY MR. ANDREU-VON EUW:

22 **Q.** Sir, the CISA document, was this the end result of your
23 disclosure process with CISA?

24 **A.** Yes.

25 **Q.** Does it reflect the vulnerabilities that you discovered?

1 **A.** Yes, it does.

2 MR. ANDREU-VON EUW: I would like to move this into
3 evidence as PX 0089.

4 BY MR. ANDREU-VON EUW:

5 **Q.** Did you prepare a demonstrative summarizing the
6 vulnerabilities the suit CISA included in its advisory?

7 MR. TYSON: Your Honor, I believe I get to object or
8 need to say whether I have an objection to Exhibit 89.

9 THE COURT: That's fine. Go ahead.

10 MR. TYSON: Just one moment, Your Honor. I want to
11 make sure I'm consulting the pretrial order.

12 First, Your Honor, I think we would say as to this
13 document, that if it formed part of the opinions of
14 Dr. Halderman in this case, it was not attached as an exhibit
15 to any of his reports in this case, so we would object on that
16 ground.

17 And then we would just object as a general hearsay
18 objection as to the other contents.

19 THE COURT: All right. Well, I think that the
20 witness can speak as a fact witness as to what is in the
21 advisory. I don't know the nature of his interaction with CISA
22 other than providing the report, but -- and then you can ask
23 the witness in his expert capacity, what portions of his -- did
24 this adopt of his report or his findings.

25 MR. ANDREU-VON EUW: Your Honor, I would also add

1 that this is a Government document, a public record, and it
2 serves as notice to the State for other reasons for
3 admissibility.

4 THE COURT: When was it issued?

5 MR. ANDREU-VON EUW: And again, there is no Rule 26
6 objection on the exhibit.

7 THE COURT: That's fine, but it still doesn't
8 affect -- I'm not saying it can't come in. I'm just explaining
9 how it can come in.

10 MR. ANDREU-VON EUW: Understood, Your Honor.

11 THE COURT: And so if you would just also give the
12 date of the report, if you would. It probably might have been
13 referenced earlier, but just give the date.

14 MR. ANDREU-VON EUW: The original release date on the
15 face of the document is June 3, 2022.

16 THE COURT: Okay. Very good.

17 BY MR. ANDREU-VON EUW:

18 **Q.** Dr. Halderman, I may have asked you this already, but does
19 this disclosure summarize the vulnerabilities that you found?

20 **A.** Yes, it does.

21 **Q.** Did you prepare a demonstrative summarizing the
22 vulnerabilities that you found and CISA validated?

23 **A.** Yes.

24 **Q.** Sir, let me get in --

25 THE COURT: You're saying you found and CISA found,

1 or CISA validated?

2 MR. ANDREU-VON EUW: CISA validated.

3 BY MR. ANDREU-VON EUW:

4 Q. Dr. Halderman --

5 THE COURT: Yes.

6 MR. TYSON: I'm sorry, Your Honor. Could I briefly
7 review the demonstrative? I haven't seen this document before.

8 THE COURT: All right. Go ahead.

9 When it says CVE under a heading there, what does CVE
10 reference? That is to you.

11 THE WITNESS: Your Honor, CVE, that stands for common
12 vulnerabilities and exposures. CVE numbers are an
13 industry-wide form of tracking individual vulnerabilities in
14 technology products.

15 So these are numbers that were assigned by CISA after
16 they completed their process of validating each of the
17 vulnerabilities.

18 THE COURT: So these are standardized codes, you're
19 saying?

20 THE WITNESS: Those are unique --

21 THE COURT: Language in the cybersecurity field?

22 Is that what you are saying?

23 THE WITNESS: Yes. To refer to this particular
24 vulnerability in the ICX, yes.

25 THE COURT: All right. Do you have any further --

1 MR. TYSON: So, Your Honor, I would just reiterate, I
2 believe this falls outside the scope of any report
3 Dr. Halderman has offered in this case, but we don't have any
4 dispute about his summarizing the CISA exhibit.

5 THE COURT: All right. Well, I'm going to allow him
6 to proceed and overrule your objection to the extent I think it
7 isn't valid at this juncture.

8 MR. ANDREU-VON EUW: You asked my next question, Your
9 Honor. I'll proceed from there.

10 BY MR. ANDREU-VON EUW:

11 **Q.** Dr. Halderman, could you please demonstrate Vulnerability
12 Number 1.

13 Actually, first, can you please read the vulnerability
14 as you have summarized it on the board?

15 **A.** Yes. So I have summarized each of the CISA
16 vulnerabilities because CISA's language is a little bit
17 jargony.

18 The first one is that safe mode is accessible and allows
19 installation of malware.

20 **Q.** With the Court's permission, could you please step down to
21 the BMD and demonstrate CISA Vulnerability Number 1.

22 THE COURT: I want to just make 100 percent sure I
23 understand what is going on here.

24 I understand the vulnerability in Number 1, and then
25 you give a -- and is the CVE code one that you ascribed or that

1 was ascribed in the review by IC -- by CISA?

2 THE WITNESS: This a number that CISA has assigned,
3 and it refers to the specific problem rather than a class of
4 problems so you can reference the CISA advisory, and one of
5 these particular headings under it is going to say which CVE
6 number has been assigned to that.

7 THE COURT: All right. And in your experience in the
8 cybersecurity field, is that typical of what CISA does when it
9 is reviewing reports to it?

10 THE WITNESS: Yes. This is how coordinated
11 vulnerability disclosure typically works.

12 THE COURT: All right.

13 THE WITNESS: Once a vulnerability is confirmed and
14 validated, it is assigned a CVE number and published.

15 THE COURT: And they were reviewing your work in that
16 connection when they identified this CVE number?

17 THE WITNESS: So the way a program like this works is
18 the agency receives a report from the parties who have
19 discovered a vulnerability and then they confer with the
20 manufacturer of the product to confirm that that is how the
21 technology works and indeed a problem. And then they --

22 THE COURT: They being, again, the agency?

23 THE WITNESS: CISA, in this case, would publish an
24 advisory on that -- on the basis of that investigation.
25 Sometimes they might have to do their own further technical

1 work as part of that; sometimes not.

2 THE COURT: And if you would just explain a little
3 bit about the basis of your familiarity with the -- with the
4 CISA -- I guess its ICX process.

5 THE WITNESS: I have taken vulnerabilities --
6 actually, numerous vulnerabilities through responsible
7 disclosure processes with -- in the course of my career.

8 I have also -- and having participated in the CISA
9 process in the course of this report involved spending
10 substantial time with them to make sure that as the discoverer
11 of the vulnerability, I understood the -- the process that they
12 were going to apply.

13 THE COURT: And in working with CISA in terms of your
14 experience in the cybersecurity field professionally, is it --
15 is coordination or collaboration with CISA in conjunction with
16 this sort of vulnerability assessment accepted as a
17 responsible, integral part of your work as a cybersecurity
18 specialist?

19 THE WITNESS: Oh, yes, absolutely. Responsible
20 disclosure, for instance, through CVD programs like this, when
21 that is the appropriate means of disclosure for a particular
22 class of problems, is absolutely an integral part.

23 THE COURT: Okay.

24 BY MR. ANDREU-VON EUW:

25 Q. Dr. Halderman, I think this might be clear already from

1 the Court's question.

2 But just to be clear, does this demonstrative summarize
3 your own findings?

4 **A.** Yes.

5 **Q.** Does it summarize your own findings as reflected in your
6 expert report?

7 **A.** Yes.

8 **Q.** Thank you.

9 MR. ANDREU-VON EUW: Your Honor, may I ask
10 Dr. Halderman to step down to the machine?

11 MR. TYSON: And, Your Honor, could I take a position
12 so I can observe?

13 THE COURT: Yes.

14 MR. TYSON: And for the record, this is reflected --
15 this particular item is reflected step by step in
16 Dr. Halderman's report, so we don't have a problem with this
17 particular demonstrative.

18 THE COURT: Okay. Thank you.

19 BY MR. ANDREU-VON EUW:

20 **Q.** Dr. Halderman, before you start --

21 THE COURT: I think that's going to be a problem for
22 the -- this whole podium is moveable if you want to move it.

23 **(There was a brief pause in the proceedings.)**

24 MR. MCGUIRE: Your Honor, may we observe as well,
25 please?

1 THE COURT: Of course.

2 The only question I have relative to where you are
3 standing, Mr. Andreu, is, are you wanting to be so close to the
4 screen? Is that why you are there as opposed to -- since I --
5 you could stand at the podium and move your --

6 MR. ANDREU-VON EUW: I don't necessarily need to be
7 close to the screen, Your Honor, but I do need to be able to
8 observe it.

9 THE COURT: To observe it. All right.

10 Well, anyone else can also stand over here if you
11 wish.

12 **(There was a brief pause in the proceedings.)**

13 THE WITNESS: Your Honor, I'm afraid I may not be
14 able to stand in front of the screen if --

15 THE COURT: I'm not worried about -- I can come over
16 here. That's fine.

17 THE WITNESS: I wish this was a little bit longer.

18 THE COURT: But we have a portable microphone, don't
19 we?

20 **(There was a brief pause in the proceedings.)**

21 THE WITNESS: Maybe if I stand like this.

22 **(There was a brief pause in the proceedings.)**

23 THE WITNESS: Now if I face this way, you will be
24 able to hear.

25 **(There was a brief pause in the proceedings.)**

1 BY MR. ANDREU-VON EUW:

2 Q. Dr. Halderman --

3 A. Yes.

4 Q. -- before you start, I do have a few more questions for
5 you.

6 First, where did you get this ballot-marking device in
7 front of you, again?

8 A. This is the ballot-marking device that was provided to the
9 Curling Plaintiffs by Fulton County under this Court's -- at
10 this Court's direction.

11 Q. On the left side of the BMD, there is a sticker and some
12 sort of device.

13 Can you point to it and explain what it is?

14 A. Yes. It is -- over on this side, it is a state of Georgia
15 acceptance testing seal, and there is a small barrel seal.
16 They are both covering one of the compartments on the side of
17 the device. These indicate that the machine has undergone
18 Georgia acceptance testing.

19 Q. And those seals are not broken because you have never
20 opened the machine; correct?

21 A. That's correct.

22 Q. Is the machine configured in the same way as you received
23 it?

24 A. It is configured in the same way that we received it from
25 Fulton County, except that I have updated the software as

1 Georgia did following Georgia's procedure to the .32 version
2 which was installed after Fulton County gave us the machine.

3 **Q.** So it is configured in the same way it would be configured
4 for a Georgia voter?

5 **A.** That's right.

6 **Q.** And this machine hasn't been hacked, just to be clear;
7 correct?

8 **A.** That is right.

9 **Q.** It is not in a hacked state; right?

10 **A.** It is not in a hacked state.

11 **Q.** Okay. Can you please demonstrate the first vulnerability
12 on your demonstrative?

13 **A.** Mr. Andreu, can I borrow your pen --

14 **Q.** Here you go.

15 **A.** -- just a second?

16 **Q.** Dr. Halderman, I saw you just put a pen behind the
17 machine.

18 What did you do?

19 **A.** Yes. So the first vulnerability as confirmed by CISA is
20 that by holding down the machine's power button, it is possible
21 to reboot the machine into what is called safe mode. And that
22 power button is covered by a plastic door that is closed with a
23 tamper-evident seal.

24 However, there is a door -- a hole in that door where the
25 cables come out for the printer and the machine's power. And

1 by inserting a tool through that door, it is possible to reach
2 the power button and hold it down. And a pen works well
3 enough. I just used your BIC pen here. You can have it back.

4 **Q.** And before we take -- return to --

5 **A.** Now, that caused the machine to reboot into what is called
6 safe mode. This is a mode that bypasses the normal Georgia
7 election software and allows you to get to the underlying
8 Android operating system.

9 **Q.** And I think you might have just answered this, but what do
10 we see on screen right now?

11 **A.** This is the Android desktop, and it is rotated. I'm going
12 to just hit a button here to rotate it so it is right-side-up
13 so that maybe we can all see it just a little bit better.

14 MR. ANDREU-VON EUW: Before we go any further, Tony,
15 can we get -- I think it is the first slide. It is the
16 photograph.

17 BY MR. ANDREU-VON EUW:

18 **Q.** Dr. Halderman, what do you see on the screen?

19 **A.** So in the center, that is a photograph of what is behind
20 the plastic door. The machine's power button is highlighted.
21 And then on the right is a picture of the door in a closed and
22 sealed state, and you can see the right side of the right-most
23 picture the hole through which the cables have to pass.

24 **Q.** Sir, does the ballot-marked -- so what -- is there a seal
25 on the door in the picture?

1 **A.** Yes. It is a seal of the same type that are typically
2 used in Georgia polling places. It is called a strap seal.

3 **Q.** Is the same --

4 MR. TYSON: I'm sorry. Your Honor, I would just move
5 to strike that last answer. I think there is a foundation for
6 Dr. Halderman's knowledge of what seals are typically used in
7 Georgia polling places. I think that can be laid, but it
8 hasn't been yet.

9 BY MR. ANDREU-VON EUW:

10 **Q.** Dr. Halderman, are you familiar with how election
11 equipment is sealed in Georgia?

12 **A.** Yes, I have undertaken study of that question.

13 **Q.** Okay. Does the voting machine in front of you have a
14 similar seal to the Georgia seal on the photograph?

15 **A.** Yes, it does.

16 **Q.** Did you cut, break, or in any way damage the seal as you
17 demonstrated the hack?

18 **A.** No, I didn't.

19 **Q.** Can you estimate roughly how long it took you to boot the
20 BMD in front of you into safe mode?

21 **A.** It took just five or ten seconds to effectuate the reboot.

22 **Q.** And I think you answered this a second ago, but what do we
23 see on the screen right now?

24 **A.** This is the Android desktop.

25 **Q.** What version of Android is this?

1 **A.** The machines run version of Android 5.1.

2 **Q.** Do you know what the current version of Android is?

3 **A.** Oh, I believe it is Android 14.

4 **Q.** Do you know if Android 5 is still supported by its
5 manufacturer?

6 **A.** No, it is not.

7 **Q.** Can you show us what one can do with this level of access?

8 **A.** Sure. So if I do this, I get the Android launcher, and
9 this is a menu of different applications that are installed on
10 the device.

11 **Q.** Can you walk us through some of those applications,
12 please?

13 **A.** Well, here we have the file manager. This is an
14 application that will let me on-screen navigate through the
15 files on the machine. You can use that to copy or delete files
16 or to open them up in an on-screen text editor and edit or even
17 change the contents of the files on the screen.

18 Here, we have the settings icon that allows you to change
19 any of the operating systemwide settings or to remove or
20 install software on the device.

21 So through the settings application is one way that
22 someone could directly install malware using this safe mode
23 vulnerability.

24 Here is another application, the terminal emulator, and
25 that one is particularly powerful.

1 Q. What does the terminal emulator allow you to do?

2 A. Well, a terminal is a text-based interface to a computer
3 that allows you to type in commands, usually more advanced
4 commands than you can get to through a graphical interface, and
5 the computer will respond with more text that indicates the
6 result of the command that you have typed.

7 Could I start it?

8 Q. Yes.

9 A. All right. I'll start the term --

10 THE COURT: Stop there.

11 MR. TYSON: And, Your Honor, at this point we would
12 object as beyond the scope of Rule 26 for this demonstration
13 because there is not a discussion as I can find it in the
14 report regarding the functioning of the terminal emulator and
15 what it carries out.

16 MR. ANDREU-VON EUW: Your Honor, I'm just checking.
17 Yes, I'm correct. Section 8.3 discussed terminal emulator, and
18 I quote, says, makes it easy for an attacker to install
19 programs or to run automated commands for malicious purposes.

20 MR. TYSON: I apologize, Your Honor. I'll withdraw
21 that. I see that section of the report now. Thank you.

22 THE COURT: It is very understandable. No problem.

23 BY MR. ANDREU-VON EUW:

24 Q. Dr. Halderman, what is the most powerful command one can
25 run with the terminal emulator?

1 **A.** Well, among the most powerful commands is something called
2 SU, and that stands for superuser. And the SU command is a way
3 of requesting that the computing device allow you and your
4 subsequent commands to essentially bypass the operating
5 system's normal security controls.

6 **Q.** Is the SU command secret or unique to this device in any
7 way?

8 **A.** No. No. This is a standard Unix operating environment
9 command. It is probably since the 1970s.

10 **Q.** What happens on a typical computer when one types SU?

11 **A.** Well, typically --

12 MR. TYSON: Your Honor, I'll just object. I don't
13 believe there is discussion of a typical computer as part of
14 the Rule 26 report.

15 MR. ANDREU-VON EUW: Your Honor, the report discloses
16 a normal Android terminal. This -- normal Android terminals
17 have normal commands. SU is typically included -- SU is
18 typically, if not always -- I don't know -- included, and this
19 is an example of what one can do with a standard Android
20 terminal, which we discussed.

21 COURT REPORTER: I need you to slow down.

22 THE COURT: Let the witness explain that and go
23 forward and explain why you think it is within --

24 MR. CROSS: Your Honor, could I add one quick thing?

25 THE COURT: Yes.

1 MR. CROSS: I think it is important not to lose sight
2 that this equipment was provided by the State and Fulton
3 County, so this --

4 THE COURT: Fulton County.

5 MR. CROSS: Right, Fulton County. Fair enough. But
6 it is provided to counties by the state, as we know. So I just
7 want to not lose sight of the fact that, unlike other
8 demonstrations where an expert might come with their own
9 equipment, the State presumably knows how their voting system
10 works.

11 MR. ANDREU-VON EUW: And further, Your Honor, the
12 report does say that he is able to easily access, control, and
13 modify any part of data or software. And he is explaining how
14 that is right now.

15 THE COURT: All right. Just keep that microphone
16 close to you. Because, otherwise, the extent of having a
17 public court proceeding is going to be defeated by no one being
18 able to understand you, past counsel's row. Thank you.

19 MR. ANDREU-VON EUW: Thank you, Your Honor.

20 BY MR. ANDREU-VON EUW:

21 **Q.** Dr. Halderman, what typically happens when one types the
22 SU command?

23 **A.** Well, typically on a computer system, the computer would
24 challenge you for some secret password before allowing you to
25 receive that superuser level of access.

1 Q. Is the password required in the case of the Dominion BMD?

2 A. Could I run the command and show you?

3 Q. Please.

4 A. I'm going to hit the enter key on the on-screen keyboard
5 which will cause the machine to execute the SU command. All
6 right. And instead of asking for a password, it's displayed an
7 on-screen prompt just asking, would I like to allow superuser
8 access, allow or deny. And I'm going to say allow.

9 And now the computer has responded by changing its prompt.
10 It now says root and has a different character here at the end
11 of the string. That indicates that I have received root
12 access, which is another name for superuser access to the
13 device.

14 So now subsequent commands that I type will be able to
15 bypass the security controls.

16 Q. Dr. Halderman, what can you do with this root superuser
17 access?

18 A. Well, gosh, it -- superuser access would allow me to -- to
19 read, to modify, or to change any of the data or software that
20 is installed on the device.

21 Q. Are there any limits to what you could do with a ballot --
22 to a ballot -- excuse me -- using this access?

23 A. To the ballot data on the machine? No.

24 Q. Are there any limits to what you could do to the election
25 software on the BMD with this access?

1 **A.** No.

2 **Q.** Are there any limits to what you could do to the operating
3 system of this BMD with this access?

4 **A.** No.

5 **Q.** And to be clear, you were -- sorry, you were going to say
6 something, Dr. Halderman?

7 To be clear, you received this access by sticking a BIC
8 pen in the back of the machine for three seconds; correct?

9 **A.** It may have been five seconds.

10 **Q.** Dr. Halderman, did you discover this vulnerability
11 yourself?

12 **A.** Actually, no, I didn't discover this one myself. I
13 actually first read about this on the US EAC's website.

14 THE COURT: The US EAC is what?

15 THE WITNESS: The EAC, that's the Election Assistance
16 Commission, the federal agency that is responsible for working
17 with state and local election offices.

18 BY MR. ANDREU-VON EUW:

19 **Q.** And what did you see on the Election Assistance
20 Commission's website?

21 **A.** The EAC published a technical advisory that Dominion
22 issued to its customers. It is dated January of 2020. I think
23 that is the first month that Georgia had deployed the Dominion
24 system.

25 MR. ANDREU-VON EUW: Can we put this on screen,

1 please, Tony? Next exhibit. Next exhibit.

2 BY MR. ANDREU-VON EUW:

3 **Q.** Dr. Halderman, can you turn to Tab 3 in your binder?

4 **A.** That is --

5 MR. ANDREU-VON EUW: Tony, it is the slide you had up
6 earlier before the --

7 BY MR. ANDREU-VON EUW:

8 **Q.** Does Tab 3 contain the advisory you are referring about,
9 Dr. Halderman?

10 **A.** Yes. Yes, this is the advisory.

11 **Q.** When is it dated?

12 **A.** January 16, 2020.

13 **Q.** What is the purpose of this advisory?

14 **A.** The purpose, presumably, was to alert customers about
15 this -- this vulnerability.

16 **Q.** Can you please read the first two -- can you please read
17 the first two sentences of the description in the advisory?

18 THE COURT: Which one? By EAC or by Dominion?

19 THE WITNESS: By Dominion.

20 THE COURT: Go ahead.

21 THE WITNESS: It says a scenario exists when it is
22 possible to restart the ICX prime in, quote-unquote, safe mode
23 and access the Android menu. If the mechanical power button
24 behind the ICX door is pressed, a power-down option is
25 presented. At this point, if the power-down screen button is

1 pressed and held, the safe mode option is presented.

2 BY MR. ANDREU-VON EUW:

3 Q. Is this what you did, Dr. Halderman?

4 A. Yes.

5 Q. Now, I know that the advisory is dated January 2022 [sic].
6 When did you receive the ballot-marking device?

7 THE COURT: I think it is January --

8 THE WITNESS: Of 2020.

9 THE COURT: -- 2020, not 2022.

10 MR. ANDREU-VON EUW: Thank you, Your Honor.

11 THE WITNESS: I received the ballot-marking device in
12 August of 2020.

13 BY MR. ANDREU-VON EUW:

14 Q. So this advisory is roughly half a year before you
15 received the device?

16 A. That's correct.

17 Q. Okay. Did your demonstration right now demonstrate any
18 other vulnerabilities on the ten vulnerabilities on the board
19 in front of you?

20 A. Yes. It also demonstrated the second vulnerability on the
21 list, that the terminal is accessible and allows the
22 installation of malware.

23 Q. And that is the one that was assigned CVE 2022-1741 by
24 CISA?

25 A. That's right.

1 Q. As of now, have you made any changes to the configuration
2 of this device in front of you?

3 A. No.

4 Q. Could one install malware from here alone?

5 A. Yes.

6 Q. Could we -- actually, before we talk more about malware,
7 could we step back and have you demonstrate the normal voting
8 process using this machine.

9 A. Okay. So to do that, I'll have to reboot the machine
10 again to exit safe mode.

11 Q. Please do.

12 A. So I'm going to type another command at the screen. I'm
13 going to type the command reboot. I'm going to press the
14 on-screen enter key, and the machine is going to reboot back
15 into its normal mode of operation.

16 Q. Can you describe what is happening on-screen,
17 Dr. Halderman?

18 A. The screen looks like -- maybe looks like an old PC. As
19 it is booting up, it is black with some white characters. Now
20 it says Dominion Voting. And now we're going to briefly see
21 the Android desktop, and now the normal voting interface has
22 appeared on the screen. It is the animation of a hand
23 inserting a card into a slot.

24 Q. Is this machine ready to vote?

25 A. It is almost ready to vote. Since it just booted up, it

1 needs a poll worker to come along and enable voting.

2 **Q.** Can you please show us how that is done?

3 **A.** Sure. So what a poll worker would typically do is take a
4 poll worker card -- this is a kind of Smart card with a
5 computer chip in it -- and insert it into this slot and then
6 enter an on-screen PIN and hit log in.

7 Now, the machine is going to ask me to confirm that the
8 clock is set correctly. It looks right, and now everything
9 looks okay, so I can take out the card and the machine is ready
10 for voters to come along.

11 **Q.** Can you please go through the voting process,
12 Dr. Halderman?

13 **A.** Sure. So a voter would be -- when they check in at the
14 polling place would receive another Smart card, a voter card
15 from a poll worker. The voter card allows them to activate the
16 ballot-marking device and print a ballot.

17 So I'm going to put a voter card into the slot. Okay.
18 Now, the machine is responding by displaying the ballot.

19 **Q.** Can you please proceed to vote?

20 **A.** Well, I'll just -- can I briefly describe that this ballot
21 is the November 2024 Fulton County ballot, it says, and this is
22 a ballot I have prepared for the demonstration.

23 All right. If I move to the first screen of the ballot,
24 it is the -- for the president of the United States, and the
25 candidates on the ballot are George Washington and Benedict

1 Arnold.

2 Q. Are you a Washington man or an Arnold man?

3 A. I think every good-blooded American is a George Washington
4 fan. So here, I'll vote for Washington. For demonstration,
5 let me just skip over the remainder of the ballot.

6 Q. Dr. Halderman, you just pressed a button.

7 Can you tell us --

8 THE COURT: Wait a second.

9 MR. TYSON: I'm sorry, Your Honor. I was just going
10 to renew our objection. I believe this ballot was prepared
11 after Dr. Halderman's report, so we would object to -- under
12 Rule 26 that this was not part of the opinions offered in his
13 report.

14 MR. ANDREU-VON EUW: Your Honor, as we discussed
15 earlier, there were just changes made to names on ballots, and
16 this ballot was provided to defendant in electronic form.

17 MR. TYSON: Your Honor, the ballot was provided to
18 us, I believe, Friday of last week. We looked at the source
19 code on Monday of this week.

20 But our objection is that it was part of the basis of
21 his opinions and was not part of his July 2021 report but has
22 been created later.

23 MR. ANDREU-VON EUW: And, Your Honor, the ballot is
24 illustrating the vulnerabilities that result from his opinions.
25 It is not the basis of his opinions.

1 THE COURT: Your voice is trailing off.

2 MR. ANDREU-VON EUW: Your Honor, I'm sorry.

3 The ballot illustrates the vulnerabilities found --
4 not even. Is used to illustrate the vulnerabilities found in
5 his opinion. It does not form the basis of his opinion.

6 THE COURT: All right. I overrule the objection. I
7 think this is nothing new, frankly, in this case. We have seen
8 this again and again. I'm not saying this particular, but I
9 don't think that this is a surprise, and it is not the basis --
10 these documents are not the basis of his opinion.

11 But -- so go ahead and proceed.

12 BY MR. ANDREU-VON EUW:

13 **Q.** Dr. Halderman, before the back-and-forth, you pressed a
14 button on the screen.

15 Can you tell us what you did?

16 **A.** Yes. I pressed the review button. That just takes the
17 voter to the review screen which summarizes the voter's
18 selections. And here on the review screen, it shows each
19 contest, and it shows for president of the United States that I
20 have selected George Washington. I could touch that to go back
21 and change my selection, or I can touch a print ballot button
22 to print the ballot.

23 **Q.** Can you please print the ballot?

24 **A.** Sure. I'll touch print ballot.

25 There is a confirmation. Do I really want to print my

1 ballot? Yes. Right now, the printer comes to life and the
2 paper is coming out.

3 **Q.** Can you please pick up the ballot that is printed and
4 describe what you see?

5 **A.** Yes. So the ballot says the title of the election, and it
6 has a large QR code, and then it has some text on it. And in
7 this ballot style, the only part of the ballot that is
8 tabulated by the kind of ballot scanners used in Georgia is the
9 contents -- the digital contents of the QR code.

10 The text below is another form of summary of the voter's
11 selections. It shows the name of each office and the selected
12 candidate, or it is supposed to.

13 **Q.** Does the ballot reflect -- does the human readable text in
14 the ballot reflect your vote for George Washington?

15 **A.** Well, voters might not take the time to review it. But if
16 I read it, it says, for president of the United States, vote
17 for George Washington.

18 So that does reflect what I picked on-screen.

19 **Q.** Do you know if the QR code on that ballot reflects your
20 vote for George Washington?

21 **A.** If read by an appropriately configured scanner, it would,
22 yes.

23 **Q.** So how would this ballot be tabulated?

24 **A.** The voter would put it into a scanner, and the scanner
25 would read the QR code and extract the data from that, and it

1 is just the data in the QR code that would be tabulated through
2 the scanner.

3 MR. ANDREU-VON EUW: I would like to move this ballot
4 into evidence as an exhibit.

5 MR. TYSON: Your Honor, we would just object. Either
6 this is a demonstrative or it is not, so we would object to it
7 being included in evidence. Also on the grounds of relevance
8 because it is not from an actual Georgia election. It is from
9 an election that Dr. Halderman created.

10 MR. ANDREU-VON EUW: Your Honor, we can keep it as a
11 demonstrative.

12 THE COURT: That's fine.

13 Would you just send this demonstrative that way
14 before it gets eaten up. Give it to Harry. That is the
15 most -- he is the anti-garbage.

16 BY MR. ANDREU-VON EUW:

17 **Q.** Dr. Halderman, next, I want to talk about the third
18 vulnerability you discovered that was assigned. This one was
19 assigned CVE 2022-1746.

20 And my first question is: Where did you get the poll
21 worker card you used for this demonstration?

22 **A.** Oh, so the poll worker card I just used is a card that I
23 created. This is a counterfeit poll worker card. And Fulton
24 County provided a poll worker card. But rather than using it
25 for this demonstration, I'm using this counterfeit one.

1 Q. Can you describe the process of making that card at a high
2 level, please?

3 A. Yes. So these are Smart cards. They are just plastic
4 cards with a programmable computer chip in them. And I bought
5 blank programmable Smart cards online, loaded them with some
6 software that I created, loaded the cards then with the
7 appropriate data, and that is the card that you see here. It
8 is a poll worker card.

9 Q. Roughly, how much did that card cost you, Dr. Halderman?

10 A. These cards cost about \$10 each. You can get them from
11 numerous online stores.

12 Q. Are there any restrictions on the sale or use of those
13 cards?

14 A. No.

15 Q. Did you need any special tools to make the counterfeit
16 poll worker card?

17 A. Special tools? Nothing exotic, just a USB Smart card
18 reader. You can buy those for about \$20 on Amazon. It is a
19 commodity device.

20 Q. Any restrictions on the sale or use of those commodity
21 devices?

22 A. No.

23 Q. Okay. Now I want to talk next about the fourth
24 vulnerability on your list assigned CVE 2022-1747 by CISA.

25 Did you also make the voter card you used to vote,

1 Dr. Halderman?

2 **A.** Yes. The voter card that I used, I also made this as a
3 counterfeit voter card. It is a very similar process. It is
4 also a programmable Smart card that I loaded with my software.

5 **Q.** Could that voter card be used on other BMDs besides the
6 one in front of you?

7 **A.** If it was for the same election, this voter card -- for
8 the same election within the same county, the voter card would
9 function.

10 **Q.** So your counterfeit voter cards could be used countywide?

11 **A.** Yes.

12 **Q.** Is the same true for the poll worker card you just showed
13 us? Can your counterfeit poll worker cards be used countywide?

14 **A.** Yes.

15 **Q.** At the high level you described, was the poll worker card
16 made using the same process as the voter card?

17 **A.** Yes.

18 **Q.** Is the voter card you created different in any way from an
19 ordinary voter card a voter would use?

20 **A.** Well, in a way, it is more powerful. A normal voter card
21 is programmed to allow the voter to print one ballot and then
22 it is deactivated by the BMD. My voter card ignores that
23 deactivation request, and so it allows you to print as many
24 ballots as you would like.

25 **Q.** Could you demonstrate that by printing a second ballot,

1 please.

2 **A.** Sure.

3 **Q.** So again, you see the same screen sequence as before?

4 THE COURT: Is that right? It is the same sequence
5 on the ballot?

6 THE WITNESS: Yes, that's right. I just went through
7 the same thing, voted for George Washington again, and it came
8 out again a ballot for George Washington.

9 BY MR. ANDREU-VON EUW:

10 **Q.** Okay. Dr. Halderman, I want to turn now to the fifth
11 vulnerability on your list CVE 2022-1745. I see -- I'll read
12 it out loud, and then I'll you ask a question.

13 It says anyone can forge technician cards for all BMDs
14 that allow installation of malware.

15 So as a starting point, can you tell us what a technician
16 card is?

17 **A.** Yes. So a technician card is the third kind of Smart card
18 for the ICX BMDs. A technician card is sort of like a master
19 key. It unlocks a technician menu from which service workers
20 at the county or Dominion personnel perform functions like
21 loading the ballot designs before an election or performing
22 software updates.

23 **Q.** Did you prepare a counterfeit technician card as well?

24 **A.** Yes, I did.

25 **Q.** Can you show us how it is used?

1 **A.** So I am inserting the technician card, and it is prompting
2 for an on-screen PIN. My card will just ignore the PIN, so I'm
3 not going to bother typing anything. And the machine has
4 unlocked, and it is displaying the technical administration
5 menu, and there is a prompt on-screen saying that menu is
6 unavailable while the poll is open. But we can just say okay
7 and ignore that.

8 **Q.** At a high level, can you describe -- can you tell us what
9 the technical administration menu is used for?

10 **A.** So as I said, service workers, county personnel would use
11 this for things like -- things like updating the software or
12 loading data beforehand. This has functions that are more
13 powerful than what a normal poll worker would have access to.

14 **Q.** And you unlocked it in one second using a technician card
15 you created?

16 **A.** That is right.

17 **Q.** Can you show us what one can do from this technician menu?

18 **A.** Sure. So what I'm going to do here is I am going to hit
19 this button at the top of the screen that says exit.

20 I'm sorry to block your view, Mr. Tyson.

21 THE COURT: That's fine. Go ahead.

22 **(There was a brief pause in the proceedings.)**

23 THE WITNESS: It is asking if I want to exit the
24 application. I'll say yes. I'm going to touch something at
25 the bottom of the screen here. And now we've gotten back to

1 the Android desktop.

2 We see all of the same stuff that we did when I
3 rebooted into safe mode. I can touch here and go back to the
4 launcher. And we have -- it is rotated a little bit, but we
5 have the same file manager, terminal, settings application.
6 All of that is accessible.

7 BY MR. ANDREU-VON EUW:

8 **Q.** Can you access the same terminal application as you did a
9 minute ago with Vulnerability Number 1?

10 **A.** Yes, I can. Perhaps I'll rotate the screen for everyone's
11 benefit once again.

12 All right. So I can go to the terminal and run my SU
13 again and say allow on the screen. Now I have superuser
14 access.

15 **Q.** So this is the same as before?

16 You now have full control of the BMD and everything on it;
17 correct?

18 **A.** That's right. And from this technician card that I was
19 able to make and without access to any secret information.

20 But the technician card, I should note, works on -- would
21 work on any BMD -- any ICX BMD running compatible software
22 anywhere. It is not specific to Georgia, a county, or a
23 specific election.

24 **Q.** Okay. Now, again, this master key you created can be used
25 to change any ballots or any ballot files for any software;

1 correct?

2 **A.** Yes. So it can be used to gain superuser access and
3 change any data or software on the device.

4 **Q.** On your report, you described automated commands.

5 **A.** Yes.

6 **Q.** Can automated commands be used to cause the machine to
7 print ballots that do not reflect the voter's intentions?

8 **A.** Yes, they can.

9 **Q.** And I think you said this, Dr. Halderman, but just to be
10 sure: Did you need any nonpublic information to make the card,
11 the technician card?

12 **A.** Remarkably, no.

13 **Q.** Now, back -- could you please demonstrate the use of
14 automated terminal commands to cause the machine to print votes
15 that do not reflect the voter's intention?

16 **A.** Yes. And let me show you. What I'm going to do, I'm
17 going to go back to the voting app.

18 **Q.** One second, Dr. Halderman.

19 This is the voting screen as a voter would see it;
20 correct?

21 **A.** Yes. Now we're back to the voting screen. I'm going to
22 put in another technician card I have prepared, and this one
23 I'm going to insert a few times. You can see I'm pulling it
24 out and putting it back in.

25 THE COURT: If you want us to hear you, we're not

1 hearing you.

2 THE WITNESS: I say I have another technician card I
3 have prepared that I have removed and inserted now several
4 times in a row. And --

5 BY MR. ANDREU-VON EUW:

6 Q. Dr. Halderman, before you continue, as of now, is this
7 machine still configured as it would be in a normal election?

8 A. Yes.

9 Q. Okay. Please continue.

10 A. This is just very awkward with the microphone and the
11 screen, but I'm going to do my best.

12 So now I'm back in the technician menu. I'm going to hit
13 exit at the top. And what I'm going to do is I'm going to go
14 to the file manager and open the ICX's audit log file. This is
15 one of the log files that the machine creates, and I'm going to
16 open it with the on-screen text editor.

17 What I have just done with the technician card is I have
18 loaded this technician card with the automated commands that I
19 want to run in a way that they appear in the audit log. But
20 I'm going to open the audit log and edit it with the on-screen
21 text editor.

22 I'm actually going to highlight a portion that came from
23 my card and hit the cut button to move it to the machine's
24 clipboard. And I'm going to save the audit log just to show
25 you that I can delete portions of the audit log with the

1 on-screen text editor.

2 **Q.** Let me stop you there, Dr. Halderman.

3 So you just inserted using the card information you wanted
4 into a log and manually deleted information from a log;
5 correct?

6 **A.** That is right. That is right. So if the card from -- the
7 technician card, one thing that the technician card can do is
8 provide just normal data that is going to become part of the
9 log file in the normal operation of the machine.

10 And I opened the log file in the text editor and was able
11 to copy that out.

12 **Q.** Are there any limits on what you can add or remove to the
13 log files on the Dominion BMD?

14 **A.** No. With the text editor, you could select and cut or
15 delete log entries that would otherwise be evidence of some
16 malfeasance.

17 **Q.** Could that be done programmatically?

18 **A.** Yes, it could.

19 **Q.** And could you please continue with your demonstration.

20 **A.** All right. We should have thought about this. I'm
21 left-handed, so this is very awkward.

22 THE COURT: Do you want to come over -- do you want
23 to come on the other side?

24 THE WITNESS: Maybe what I'll do is --

25 THE COURT: Do you want a chair there?

1 MR. ANDREU-VON EUW: You can also just --

2 THE WITNESS: I'm not sure I can reach the
3 microphone. Maybe if I do this, this is going to --

4 THE COURT: No, don't do that. That doesn't help at
5 all. That is too awkward.

6 THE WITNESS: That is not going to help. Excuse me.

7 Here is what I'm going to do now: I'm going to go
8 and go back to the launcher and open the terminal again, and
9 now I am going to hold down my finger on the screen and paste
10 that snippet of command that I copied out of the log file, and
11 then I'm going to type just some very basic and short commands
12 to complete the function that I want to execute.

13 All right. So you can see I'm still in superuser
14 mode, and I've pasted a command and then typed a few characters
15 afterwards. And what this command that I have constructed will
16 do is it is telling the machine to take the other automated
17 commands out of the log file that were copied from my
18 technician card and execute them.

19 BY MR. ANDREU-VON EUW:

20 **Q.** And to be clear, were those the commands that were
21 produced to the defendants as part of the code review?

22 **A.** Yes, that is right.

23 **Q.** Thank you.

24 What is the next step, Dr. Halderman?

25 **A.** Now I'll press enter on the on-screen keyboard. Okay.

1 Now the machine has responded with okay, indicating that the
2 modification is complete.

3 **Q.** Could you go through the voting process one more time,
4 Dr. Halderman.

5 **A.** Okay. So now I'll exit back to the voting application.
6 Now, since this is restarted, we'll use the poll worker card to
7 activate.

8 All right. Now we're back to voting.

9 MR. TYSON: Your Honor, just before we proceed here,
10 I just wanted to object. I believe the installation of malware
11 that is discussed in Dr. Halderman's report relates to USB
12 devices being connected to this.

13 I don't recall -- and I'm happy to be corrected on
14 this -- if there is a reference in his report to installation
15 of software via technician card alone.

16 BY MR. ANDREU-VON EUW:

17 **Q.** Dr. Halderman, did you install any software right now?

18 **A.** No, I didn't. I just ran an automated command. There is
19 no malicious software now resident on the machine.

20 **Q.** And what did that command do?

21 **A.** That command made changes to the ballot definition file on
22 the machine.

23 **Q.** Okay. Can you please continue to vote?

24 **A.** All right. So I'll put in my voter card once again.

25 All right. We're back to the Fulton County November 2024

1 demonstration ballot, and again, we have for president Benedict
2 Arnold, George Washington. I'll do George again.

3 Q. Before you continue, you voted --

4 THE COURT: Just a second.

5 MR. TYSON: I'm sorry for that.

6 Again, Your Honor, I'll just renew my objection here.
7 I still don't see in Dr. Halderman's report where this method
8 of modifying a ballot definition file is part of his report in
9 this case.

10 MR. ANDREU-VON EUW: Your Honor, I think I pointed to
11 one of the more poignant sections, and again, these exact
12 commands were produced to defendants.

13 THE COURT: In the report or at another time?

14 MR. ANDREU-VON EUW: The report discloses the use of
15 automated commands, and the commands were produced over the
16 course of the pretrial process.

17 MR. TYSON: Could I have the reference where in the
18 report that is referenced?

19 MR. ANDREU-VON EUW: It is what I read earlier,
20 Section 8.3.

21 Specifically, 8.3 says the terminal can be used to
22 access, control, or modify any part of the data or software.

23 The data was modified right here.

24 MR. TYSON: And, Your Honor, we would -- again, we
25 would just object. The reference is to modifying part of the

1 data or software. It is not part of any part of
2 Dr. Halderman's report related to modifying the actual ballots
3 that is being offered.

4 We think this needs to be spelled out further in the
5 report to be a sufficient Rule 26 disclosure.

6 MR. ANDREU-VON EUW: Your Honor, we think the
7 disclosure is sufficient.

8 THE COURT: Okay. Well, it is --

9 MR. ANDREU-VON EUW: And just to be clear, the ballot
10 is data on the machine, and we have disclosed the modification
11 of data quite expressly.

12 THE COURT: Okay. All right. Well, I think it is
13 data on the machine. So let's proceed.

14 THE WITNESS: May I print the ballot?

15 We're back at the review screen, and I have a vote
16 for George Washington for president.

17 BY MR. ANDREU-VON EUW:

18 **Q.** Please print.

19 **A.** I say print the ballot. All right. And it has printed my
20 ballot.

21 **Q.** Can you look at the human readable text and tell me what
22 vote it reflects?

23 **A.** All right. My read here, again, president of the United
24 States, vote for Benedict Arnold.

25 **Q.** And, again, you voted for George Washington; right?

1 **A.** I did. The review screen isn't up anymore. That
2 disappears when the paper comes out.

3 But yes, I voted for George Washington.

4 **Q.** So if you weren't sure how you voted, you would have no
5 way to check at this point; correct?

6 **A.** Or to prove to anyone else, that is right.

7 **Q.** Okay. Now, do you know if the QR code reflects a vote for
8 George Washington or Benedict Arnold?

9 **A.** The QR code, if scanned on a normally configured scanner,
10 would also read as a vote for Benedict Arnold.

11 **Q.** Do you know how this ballot would tabulate if it was put
12 into a scanner?

13 **A.** As a vote for Benedict Arnold.

14 **Q.** If this ballot was audited, would there be any signs to
15 indicate that that was not the vote intended by the voter?

16 **A.** No. Because all of the records of the voter's choice on
17 this ballot, the QR code, and the printed text say Benedict
18 Arnold. They are the same.

19 **Q.** Okay. Dr. Halderman, why don't I let you take a seat and
20 we can continue testimony.

21 THE COURT: Okay. I'm going to allow a restroom
22 break for five minutes, and then we'll start.

23 Do you need any water?

24 Yes, you have it.

25 COURTROOM SECURITY OFFICER: All rise.

1 THE COURT: If anyone needs to use the restroom, use
2 it now. We're going to start back right away.

3 (A brief break was taken at 3:06 PM.)

4 MR. ANDREU-VON EUW: Proceed, Your Honor?

5 THE COURT: Yes.

6 MR. ANDREU-VON EUW: Before we continue, I would just
7 like to move the Dominion advisory into evidence, Exhibit
8 Number PX 602, I believe.

9 MR. TYSON: And, Your Honor, we would just object to
10 this Dominion advisory. Dr. Halderman has testified he relied
11 on this for part of the design of his report but didn't attach
12 it as an exhibit or reference it. So we don't think it is
13 proper.

14 We also believe it is hearsay as from Dominion.

15 MR. ANDREU-VON EUW: It would take me a second to
16 find it for Mr. Tyson, but it is expressly cited in a footnote
17 in his report.

18 THE COURT: All right.

19 MR. TYSON: I'm sorry, Your Honor. I'll take
20 counsel's representation on that. We'll just then lodge only a
21 hearsay objection in that case.

22 THE COURT: All right.

23 BY MR. ANDREU-VON EUW:

24 Q. Dr. Halderman, is any kind of special training needed to
25 use the commands you just demonstrated?

1 MR. TYSON: Your Honor, I'll object here in terms of
2 Dr. Halderman's ability to talk about the need for specialized
3 training. I don't think that is covered in his report.

4 I'm happy to be corrected again. I know it is a
5 lengthy report.

6 MR. ANDREU-VON EUW: I think Dr. Halderman teaches
7 students as his profession.

8 THE COURT: I think you have to ask him, what is the
9 basis for -- if you are saying that he doesn't -- it doesn't
10 require a specialized training, just ask him, does it require
11 specialized and what --

12 BY MR. ANDREU-VON EUW:

13 Q. Dr. Halderman --

14 THE COURT: -- based on his experience and --

15 BY MR. ANDREU-VON EUW:

16 Q. Based on your experience as a professor and otherwise,
17 does -- is any specialized training needed to use the commands
18 you just used?

19 A. Well, you might need specialized training to invent the
20 commands the first time. But after that, you could just write
21 them out or make instructions for anyone and send anyone to a
22 polling place to interact with the machine.

23 Q. Thank you.

24 And I want to ask you now, changing subjects,
25 Dr. Halderman, I believe it was Mr. Beaver earlier in this

1 trial testified about certain file size checks that are
2 performed to look for malware.

3 Did you review that portion of his testimony?

4 **A.** I did.

5 **Q.** Do you know if the attack you just demonstrated can be
6 detected by checks like the ones Mr. Beaver described?

7 **A.** Well, the attack I just demonstrated doesn't change the
8 size of any file except for ones that naturally change sizes
9 the machine is operating.

10 So no, that wouldn't detect it.

11 **Q.** Is the size of the ballot file you modified changed by
12 your attack?

13 **A.** No, it is exactly the same size.

14 **Q.** And to be clear, you mean it is the same size before it is
15 modified and after it is modified?

16 **A.** Before and after.

17 **Q.** Right. Turning back to the list of vulnerabilities that
18 you disclosed to CISA, the sixth one is titled Alt-Tab Allows
19 Installation of Malware. And the seventh is called Inadequate
20 Application Signing Allows Installation and Spreading of
21 Malware.

22 Did you prepare a video that demonstrates exploitation of
23 these vulnerabilities?

24 **A.** Yes.

25 **Q.** Does your video illustrate the use of malware described in

1 your report?

2 **A.** Yes.

3 **Q.** Was the code for that malware provided to defendants?

4 **A.** Yes.

5 **Q.** At a high level, can you tell us what the video shows?

6 **A.** The video shows -- the video shows BMD running an
7 election. Then an attacker attaches a malicious USB device
8 that uses these vulnerabilities to install malicious software
9 onto the BMD. Then there are some subsequent votes, and we
10 scan all of the ballots through the Dominion scanner and show
11 the totals in the election.

12 **Q.** Was the video taken in all one take?

13 **A.** Yes.

14 **Q.** So it is fully contiguous from one camera?

15 **A.** Yes.

16 **Q.** Does it accurately depict the process of installing
17 malware that exploits Vulnerability Number 6?

18 **A.** Yes, it does.

19 **Q.** Okay. The video is almost 15 minutes long, so I'm just
20 going to ask you about a few short sections.

21 MR. ANDREU-VON EUW: Tony, could we go to Segment 1,
22 which is at the 2 minute, 47 mark on the entire video, I
23 believe.

24 MR. TYSON: Your Honor, before we get into this
25 particular demonstrative, I wanted to interpose an objection to

1 this video itself.

2 We have reviewed this demonstrative, and while --
3 unlike the other things we have just looked at which were
4 described in detail in Dr. Halderman's report, this particular
5 video, while the concepts are described in the report, the
6 steps that are taken in this video with this particular
7 election file and the particular election are not.

8 So we would lodge an objection under Rule 26
9 disclosure based on the case we cited earlier, *The Estate of*
10 *Thompson v. Kawasaki*, 291 F.R.D. 297313.

11 Mr. Cross is correct, the court ultimately allowed
12 that, but recognized that demonstrative evidence which
13 summarizes or supports an expert's opinion has to be contained
14 in the report.

15 The other case we can provide is *United States v.*
16 *NortonLifeLock*. That is 2022 WL 278773 at page star 4. That
17 is from the District of Columbia District Court on
18 January 31st, 2022.

19 MR. ANDREU-VON EUW: Your Honor, I would note that
20 the steps depicted in the video shown in steps one through five
21 in Section 8.5 of Dr. Halderman's report -- I believe Mr. Tyson
22 was referring to the fact that the report doesn't say exactly
23 which ballot would be demonstrated -- would be used to
24 demonstrate those steps, but the steps are in the report.

25 THE COURT: Does that modify your -- your position?

1 MR. TYSON: It doesn't, Your Honor. Again, with the
2 other items in the report, Dr. Halderman describes step by
3 step. With this particular demonstration, he discusses the
4 concepts: If I could install this device on the USB of the
5 printer cable, I could have this result happen.

6 But the specific method is not outlined in terms of
7 this particular election file and election in this -- in the
8 report.

9 MR. ANDREU-VON EUW: Your Honor, what Dr. Halderman
10 is demonstrating -- I'm sorry.

11 THE COURT: I think that you can ask him to explain
12 and respond to that. I think it would be more helpful than
13 have you describe it.

14 MR. ANDREU-VON EUW: I agree, Your Honor. Thank you.

15 THE COURT: So if you can -- Dr. Halderman, if you
16 could address the difference, if there is any, between the way
17 you have handled the descriptions.

18 THE WITNESS: The report describes the process by
19 which malware alters a ballot in great detail. And this video
20 is showing that applied to not just any ballot but the
21 acceptance testing ballot that was provided to us with the
22 Fulton equipment.

23 THE COURT: Are there any steps that you left out?

24 THE WITNESS: No.

25 THE COURT: All right. Well, I think you can get at

1 these issues in cross-examination, and I'm going to allow him
2 to proceed.

3 BY MR. ANDREU-VON EUW:

4 **Q.** Dr. Halderman, could you please review Section 8.5 in your
5 report in front of you before we start, and you may want to
6 review Section 8.4 as well.

7 **A.** Yes. So Section 8.4 explains in detail the steps of the
8 attack in a manual fashion, and Section 8.5 says that they can
9 be automated with a malicious USB device.

10 **Q.** One second, Dr. Halderman.

11 MR. ANDREU-VON EUW: Could you -- Tony, could we
12 please play the video.

13 **(Playing of the videotape.)**

14 BY MR. ANDREU-VON EUW:

15 **Q.** And, Dr. Halderman, could you explain what we're seeing on
16 the screen.

17 THE COURT: Do you want them simultaneously, or are
18 you going to stop the --

19 BY MR. ANDREU-VON EUW:

20 **Q.** Dr. Halderman, how would you prefer?

21 **A.** Oh, I didn't see that it had started. I would be happy to
22 talk over the video if you can go back to the beginning.

23 I think it will be -- all right. So here we see the
24 Fulton ICX configured to run an election with the acceptance
25 testing ballot.

1 Now our attacker is going to reach behind the printer and
2 unplug the USB cable and plug it into an attack device. This
3 is a device called a Bash Bunny. It looks like a big USB
4 stick, but it is able to -- we're able to load it with a
5 sequence of commands that it will then send to the device as if
6 it were a keyboard.

7 Now the Bash Bunny is going to start -- if you can play
8 the video, the Bash Bunny will start driving the device, and
9 you can see that it is moving through a sequence of things on
10 the screen. This is the USB device controlling it.

11 And it is going to go through and modify settings, as I
12 describe in the report. It is going to then open a terminal,
13 get superuser access, and take steps to install malicious
14 software that is stored on that same USB device.

15 Now, the USB -- the malicious software is a version of the
16 ICX application that we have -- we have extracted from the
17 machine and slightly modified to add some malicious
18 functionality. And the Bash Bunny device is installing the
19 malicious version of the application on the machine and
20 replacing the version that regularly would function.

21 **Q.** Dr. Halderman, has anything been done by the attacker
22 other than connect a device to the USB cable?

23 **A.** No. In this case, the attacker only needs to attach the
24 device to the printer and to the USB cable, and the device will
25 automatically go through the remaining steps.

1 Now it is finished with the attack, and it is restarting
2 the election software.

3 **Q.** And no special --

4 THE COURT: Stop there.

5 Just for those of us who don't live in a world of
6 hacking ourselves, explain -- you're saying it has gone through
7 the attack process, so you just --

8 THE WITNESS: Yes.

9 THE COURT: You loaded the software via the drive --
10 extra drive?

11 THE WITNESS: Yes.

12 THE COURT: Substituting it with --

13 THE WITNESS: Yes.

14 THE COURT: And then tell me what happened next.

15 THE WITNESS: So the -- when the device is attached,
16 what it does is it goes to the -- it uses the settings app to
17 enable the installation of foreign applications. Then it goes
18 to the terminal and uses the terminal to install -- to
19 uninstall the original app and install a malicious version of
20 the ICX app that is stored on the USB device.

21 So this device can both be a USB drive and an
22 automatic USB keyboard at the same time, and as a keyboard, it
23 just enters a series of keystrokes that are preloaded by the
24 attacker.

25 THE COURT: And this can happen in the time period we

1 just saw?

2 THE WITNESS: Yes. It takes a little less than
3 two minutes.

4 And the end result is the election software on the
5 machine has now been changed to a version of the election
6 software that contains malicious code rewrote.

7 MR. ANDREU-VON EUW: Shall I proceed, Your Honor?

8 THE COURT: Yes.

9 BY MR. ANDREU-VON EUW:

10 **Q.** And so there were no special cards or anything needed for
11 this attack other than that USB device; correct?

12 **A.** Yes. It is a device called a Bash Bunny. It costs maybe
13 \$100. You can buy it online. It is made for this kind of
14 hacking purpose.

15 **Q.** So on the screen right here, Dr. Halderman, there is a
16 Bash Bunny connected to the end of a USB cable; correct?

17 **A.** Yes.

18 **Q.** Where does that USB cable connect to?

19 **A.** Well, the other end of that USB cable connects to the BMD.

20 **Q.** Why is the Bash Bunny connected to a cable as opposed to
21 the BMD itself?

22 **A.** Well, so the USB ports on the BMD are behind sealed
23 plastic doors in order to make it so they are not accessible to
24 the voter during voting. In other phases of the election
25 process, they might not be sealed, they could be directly

1 reachable. But during voting, those doors are sealed.

2 But the other end of the USB cable that attaches the
3 printer to the USB -- excuse me. There is a USB cable from one
4 of those ports that attaches to the back of the printer, and
5 the end of that cable that attaches to the printer is not
6 typically sealed to the printer.

7 **Q.** Now, in the video, the Bash Bunny device is sitting on top
8 of the printer.

9 Is that -- go ahead.

10 **A.** Yes.

11 **Q.** The question is: Is that what one would do if one were
12 trying to evade detection?

13 **A.** Well, no. Of course you could sit it back behind the
14 printer, for instance.

15 **Q.** Do you have any opinion as to whether a voter could
16 connect the USB cable to the back of a printer without being
17 detected?

18 **A.** It depends on the layout of the polling place. But in
19 many Georgia polling places, there are privacy Shields that
20 surround the printer and BMD that would provide an opportunity
21 to tamper behind the printer without it being readily
22 observable.

23 MR. TYSON: And, Your Honor, I'll move to strike the
24 last part of Dr. Halderman's answer regarding the typical setup
25 of a Georgia polling place. We established he has no

1 specialized training or knowledge in Georgia election
2 administration, and I don't think there is a foundation for
3 observation of Georgia polling places that will allow him to
4 opine about what a typical Georgia polling place would be set
5 up as.

6 BY MR. ANDREU-VON EUW:

7 Q. Dr. Halderman --

8 MR. ANDREU-VON EUW: I think I can address this, Your
9 Honor.

10 THE COURT: All right.

11 BY MR. ANDREU-VON EUW:

12 Q. Dr. Halderman, are you familiar with the layout of polling
13 places in Georgia?

14 A. I have undertaken a study of Georgia polling place
15 layouts.

16 Q. Thank you.

17 THE COURT: Well, what did you do? I mean, there is
18 a lot of different places and people --

19 THE WITNESS: Of course. Of course.

20 THE COURT: -- and lots of places do different
21 things.

22 THE WITNESS: Of course. So I -- what I did was I
23 reviewed all of the press photographs that I could find that
24 have been taken during elections in Georgia in polling places
25 to see what the layout would be. I have also reviewed the --

1 the polling place -- the poll worker guide and other
2 documentation provided by the defendants.

3 THE COURT: All right. Well, I don't know that it is
4 an expertise, but he has a basis for his observation as to
5 there are at least some places. I don't know that we know the
6 percentage of them from that in any way, but that will provide
7 secrecy to -- I guess is what you are saying to the -- to the
8 printer where you are trying to connect up the equipment; is
9 that right?

10 THE WITNESS: Yes.

11 THE COURT: All right. But having been a voter
12 myself, I think that there are -- in a variety of locations,
13 there is a variety of arrangements that people end up facing.

14 THE WITNESS: Oh, no doubt, and that is why I would
15 say that this is going to depend on the layout of the polling
16 place for sure.

17 BY MR. ANDREU-VON EUW:

18 **Q.** Dr. Halderman, we also saw some activity on the ballots --
19 the marking device's screen as the Bash Bunny remote controlled
20 it.

21 Could that be seen by a poll worker?

22 **A.** Potentially. But because of the existence of privacy
23 shields around the BMD, it might also be easy for the -- it
24 might also be possible for the attacker to just shield the
25 screen with his or her body to make it so it would not be

1 readily apparent.

2 The issue is that if someone can see the screen, they can
3 likely see the voter's selections, either on the ballot or the
4 review screen, and so the -- in order to defend against that,
5 polling places are laid out so that the -- there is some amount
6 of privacy for the screen.

7 **Q.** Turning back to the full video, Dr. Halderman, I think you
8 said there was voting that occurred on the screen on the video;
9 correct?

10 **A.** Yes.

11 **Q.** Does the video include the scanning and tabulation of that
12 voting?

13 **A.** Yes, it does.

14 **Q.** Actually, first, did you prepare a slide showing how the
15 votes were cast in the video just summarizing the screenshots?

16 **A.** Yes. Just summarizing what is in the video, that's right.

17 **Q.** Are these images for the video of the five ballots that
18 were cast on this slide?

19 **A.** Yes.

20 **Q.** I want to focus you on the Sunday liquor sales race.

21 Can you tell me what the votes are for the Sunday liquor
22 sales race?

23 **A.** So in that contest, there is a vote for yes on each of the
24 five ballots.

25 **Q.** So that's five yeses and zero noes; correct?

1 **A.** That is right. And in the video, the voter votes yes on
2 the screen five times to produce these five ballots that say
3 yes in the ballot text.

4 **Q.** Okay.

5 MR. ANDREU-VON EUW: Tony, could we please go to
6 Segment 2 which corresponds to, I believe, 10 minute, 12 second
7 mark on the full video.

8 BY MR. ANDREU-VON EUW:

9 **Q.** Can you tell us what this video depicts as we play it,
10 please, Dr. Halderman?

11 **A.** So this video shows the --

12 MR. ANDREU-VON EUW: Tony, can you press play?

13 THE WITNESS: This video shows that scanner that
14 plaintiffs received from Fulton County. It does not have any
15 kind of tampering or malware involved. It is just running the
16 normal acceptance test election.

17 We're going to scan five ballots. These five ballots
18 that I was just talking about, all yes on that liquor sales
19 question through the machine, and it is going to count those
20 ballots as it normally would by reading the QR codes.

21 All right. That's the fifth ballot.

22 BY MR. ANDREU-VON EUW:

23 **Q.** So, Dr. Halderman, is this scanner configured and
24 operating as it would be in a normal election?

25 **A.** Yes. And now there are a number of steps to close the

1 polls and ask the scanner to produce a poll tape showing the
2 results that it has determined from the ballots. We'll go
3 through those now.

4 **Q.** Those are the steps we're watching right now?

5 **A.** Yes. That is what is happening now. This is just closing
6 the polls.

7 And again, no tampering with the scanner of any kind.

8 **Q.** And what is happening now?

9 **A.** Now the polls are closing, and the scanner is going to
10 print the poll tape showing the number of votes it counted for
11 each candidate.

12 **Q.** So to be clear, the five ballots we saw a second ago with
13 yes votes for the Sunday liquor sales have been fed into the
14 scanner, and what we're seeing is the tabulation of those
15 votes; correct?

16 **A.** That's right. And it will print for each contest the
17 votes tabulated for each candidate.

18 **Q.** Do you see the tabulation for the Sunday liquor sales
19 election on-screen?

20 **A.** Yes, I do.

21 **Q.** What is it?

22 **A.** It says two votes for no, excuse me -- two votes for yes,
23 and three votes for no.

24 **Q.** Does that reflect what was shown on the human readable
25 portion of the ballots that were scanned?

1 **A.** No. It should be five votes for yes and no votes for no.
2 And the scanner sees only two votes for yes and three votes for
3 no, so three of the yes votes have been changed to no votes.

4 **Q.** How were the three yes votes changed to no votes?

5 **A.** This is the effect of the malware that was installed onto
6 the scanner -- excuse me -- the malware that was installed onto
7 the BMD by the USB device.

8 **Q.** Sir, I just want to be clear for the record.

9 The scanner had no malware; correct?

10 **A.** The scanner had no malware. I just misspoke. This is the
11 result of the malware that was installed onto the BMD by the
12 USB device. It changed the QR codes on three of the ballots so
13 that they reflected votes for no instead of votes for yes in
14 that contest.

15 **Q.** Have you made other versions of this malware --

16 COURT REPORTER: I couldn't understand you.

17 MR. ANDREU-VON EUW: I'm sorry.

18 BY MR. ANDREU-VON EUW:

19 **Q.** Have you made other versions of this malware we just saw
20 demonstrated that changed both the QR code and the human
21 readable text?

22 **A.** Yes.

23 **Q.** And the attack we demonstrated earlier, that also changes
24 human readable text and the QR code; correct?

25 **A.** Yes. The attack I demonstrated on the BMD in front of me.

1 Q. So focusing on human readable text, have you personally
2 done any research about how carefully voters review their
3 ballots?

4 A. Yes, I have.

5 Q. Can you summarize it, please?

6 A. In a 2020 study, my team and I conducted a mock election
7 with around 250 people who we brought into a mock polling place
8 and asked to vote on a BMD that we had hacked to change one
9 selection on each printed ballot in the human readable text.

10 And we let those voters vote and didn't tell them that the
11 machine was hacked. We just measured and recorded how many
12 people noticed a problem or reported it.

13 Q. And what were your results?

14 A. Approximately 93 percent of the participants in our base
15 case failed to notice that there was a problem with their
16 printed ballot, that one of the selections had been changed.

17 Q. So only seven percent of the voters noticed that you had
18 changed their votes?

19 A. A little bit less than seven percent in the base case.

20 Q. Are you aware of any other research about how carefully
21 voters review their ballots?

22 A. I have reviewed a study conducted by researchers at the
23 University of Georgia, I believe, in collaboration with the
24 Secretary of State's office where they observed polling places
25 in Georgia during the 2020 election to record how long voters

1 spent looking at their ballots before scanning them.

2 Q. And what were the results of that study?

3 A. The UGA study found that half of voters either didn't look
4 at the ballots at all or only briefly glanced at them, and only
5 about -- I believe about 20 percent of voters looked at the
6 ballots for five seconds or more.

7 Q. In both studies, some voters reviewed ballots; fair?

8 A. That is fair.

9 Q. Now, if an error is caught by a few voters, won't that
10 cause poll workers to investigate?

11 A. Well --

12 MR. TYSON: Your Honor, I'll object here in terms of
13 Dr. Halderman's ability to opine on the actions of poll workers
14 if an error is brought to their attention.

15 BY MR. ANDREU-VON EUW:

16 Q. Dr. Halderman, could you please summarize any knowledge
17 you have on how poll workers react to errors being reported.

18 THE COURT: I think --

19 MR. TYSON: Your Honor --

20 THE COURT: I think you've got to lay the foundation
21 of -- for whatever he is going to be testifying about, or ask
22 him to explain the basis upon which he is -- whatever -- I
23 mean, I know what we've just said here. But then the question
24 was that Mr. Tyson objected to, Your Honor, I'll object here in
25 terms of Dr. Halderman's ability to opine on the actions of

1 poll workers if an error is brought to their attention.

2 So the point is, is that he studied voter conduct. I
3 guess what Mr. Tyson is suggesting is, how does he know how
4 voter -- poll workers would react to it?

5 MR. TYSON: And, Your Honor, to be clear as well, I
6 also believe that it is beyond the scope of any reports
7 Dr. Halderman has provided in this case on the actions of poll
8 workers.

9 THE COURT: All right. You listened to this
10 colloquy, Dr. Halderman.

11 Is there anything that you can say that you think is
12 based on the information and studies that you've referenced in
13 the course of this case and in your report?

14 THE WITNESS: Well, let me give an answer based on my
15 peer-reviewed study of voter verification behavior.

16 THE COURT: You've referenced that in your study
17 here --

18 THE WITNESS: It is referenced in my --

19 THE COURT: -- that you submitted in this case?

20 THE WITNESS: Yes, Your Honor. It is referenced in
21 my report.

22 And one fact we reported in that study was that
23 voters in our experiment, when they did notice something was
24 wrong with the text of their ballot, they often blamed
25 themselves and they said, oh, I must have made a mistake while

1 voting on-screen.

2 They didn't -- it didn't occur to them that it might
3 be a malfunction or a hack of the machine.

4 And I would say on the basis of that behavior by
5 voters, I would also expect that poll workers would sometimes
6 erroneously conclude that voters made a mistake rather than
7 that the machine had malfunctioned if a voter reported such a
8 problem.

9 THE COURT: All right. But we have no way of
10 quantifying that at this point; right?

11 THE WITNESS: I don't have quantification of that
12 that I'm offering.

13 THE COURT: Your observation is obviously based on
14 your study. It is just simply we don't have a quantification.
15 All right.

16 BY MR. ANDREU-VON EUW:

17 **Q.** Dr. Halderman, could one design malware to take
18 advantage -- to avoid the risk of detection -- to minimize the
19 risk of detection?

20 **A.** Yes.

21 **Q.** How?

22 **A.** Well, one way -- one way you could do that, which I have
23 programmed in malware -- some of the malware for this -- that
24 is the basis for my report does that.

25 **Q.** How?

1 **A.** Excuse me. Some of the malware I created in the context
2 of the report does this.

3 Instead of cheating on every ballot, you could program
4 malware to cheat on every second ballot, every third ballot,
5 et cetera, something like that. So that if a voter noticed a
6 problem and complained and then was instructed to go back to
7 the machine, try again, we'll see if it is a problem with the
8 machine. When the voter repeated the same selections, the
9 ballot would come out correctly.

10 **Q.** So for a close race, could one program malware to change
11 every tenth ballot, for example?

12 **A.** Or even less frequently.

13 **Q.** Any number one wanted?

14 **A.** Yes.

15 **Q.** I want to change topics slightly to hand-marked paper
16 ballots.

17 Do you have an opinion as to whether hand-marked paper
18 ballots have -- present more or less risk than Dominion
19 ballot-marking devices?

20 MR. TYSON: Your Honor, I'll object here as beyond
21 the scope of Dr. Halderman's report. I believe his report is
22 about vulnerabilities in the ballot-marking device system, not
23 about the relative degree of risk between different types of
24 election systems.

25 MR. ANDREU-VON EUW: Your Honor, I can't say whether

1 he's done express comparison. But within his declaration, he
2 has certainly presented opinions on the safety of a hand-marked
3 paper ballot.

4 THE COURT: Can one of your group identify where that
5 is for the Court and for defense counsel?

6 MR. ANDREU-VON EUW: Well, let me come back to this,
7 Your Honor.

8 THE COURT: All right.

9 MR. ANDREU-VON EUW: I want -- one second. Let me
10 just step up and get my copy of the report, Your Honor.

11 BY MR. ANDREU-VON EUW:

12 **Q.** So I want to turn back to the vulnerabilities that you
13 disclosed that we have up here on the demonstrative, sir. I
14 want to turn now to the next two -- excuse me.

15 Going back to the video we just watched, can you please
16 explain what Vulnerability 6 is and how it relates to that
17 video?

18 **A.** Yes. So Vulnerability 6 is a vulnerability that is
19 present in the machines as a result of the software update
20 process that was applied to install the .32 version of the
21 Dominion software in Georgia. Following that process leaves
22 the machine in a state where a keyboard device or a Bash Bunny
23 attached to a USB port can access the Android desktop and other
24 things by sending just the single keystroke, the Alt-Tab
25 keystroke.

1 And that's just like you would switch windows from one
2 window to another on a PC. That keystroke has an analogous
3 function on the Android operating system on the BMD and allows
4 you to access the Android operating system.

5 **Q.** And is that what the Bash Bunny did in the video?

6 **A.** That is -- yes, that is the beginning of what the Bash
7 Bunny does to access Android.

8 **Q.** Can you speak -- can you tell us what Vulnerability
9 Number 7 is and how it relates to the video we watched?

10 **A.** Vulnerability 7 is that there isn't an effective
11 cryptographic protection in the ICX to validate that
12 applications installed on it actually are genuine software that
13 comes from Dominion.

14 As a result of that lack of application signing, a
15 modified version of the ICX application software can be
16 installed that will change the functioning of the device.

17 **Q.** Thank you.

18 Now I want to turn to Vulnerabilities 8 and 9 that we have
19 in front of us that is CVE 2022-1743 and CVE 2022-1744.

20 And now, before we discuss the details, I want to step
21 back a little.

22 All of the vulnerability exploits you have demonstrated
23 thus far require physical access to a ballot-marking device;
24 correct?

25 **A.** Yes, that's true.

1 Q. Is there a way to use Vulnerabilities 8 and 9 to install
2 malware without anybody having physical access to the
3 ballot-marking device?

4 A. Yes. And for that reason, I think these vulnerabilities
5 are particularly concerning.

6 Q. And how do they do that?

7 A. These vulnerabilities provide a way to install malware by
8 piggybacking, essentially, on the normal pre-election processes
9 that are used to install the ballot information onto all of the
10 BMDs prior to an election.

11 Q. Before we discuss the vulnerabilities and the malware, why
12 don't we go into that pre-election process.

13 Have you prepared a slide that allows you to describe this
14 process to us?

15 A. Yes.

16 MR. ANDREU-VON EUW: Can we see Slide Number 7, Tony?

17 BY MR. ANDREU-VON EUW:

18 Q. Okay. Can you please describe the normal pre-election
19 process, or at least the relevant parts for explaining how your
20 vulnerability exploit works?

21 A. Yes. So as I said, before every election, every BMD needs
22 to be loaded with what is called an election definition. This
23 is information, data that tells the BMD what is on the ballot.

24 In Georgia, the election definitions for the entire state
25 are prepared by the Center for Election Systems at the

1 Secretary's office using an election management system
2 computer. This is disconnected computers running Dominion
3 software.

4 From the Secretary's office, the election definition data
5 for each county is sent to the county, and the county loads
6 that data into its own election management system computer,
7 another disconnected computer, and then the county uses
8 Dominion software to burn the relevant data onto one or more
9 USB sticks that are used to copy the data to each ICX.

10 **Q.** So by ICX, you mean the Dominion ballot-marking device?

11 **A.** The ballot-marking device.

12 **Q.** And so just to make sure I understand, generally, in
13 every -- every BMD in the county is loaded with the same
14 election definition file?

15 **A.** Yes.

16 **Q.** And in each county, that file comes from the same EMS
17 computer?

18 **A.** The county's EMS.

19 **Q.** And each county gets its file from the State's EMS
20 computer?

21 **A.** Yes.

22 **Q.** Can you please explain what Vulnerability Number 8 --
23 again, that is CVE 202-1743 [sic] is and how it relates to this
24 process?

25 **A.** Yes. This vulnerability is a flaw in the BMD's software

1 system that makes it possible for an attacker to -- that makes
2 it possible for an attacker to make certain modifications to
3 the ballot -- excuse me -- to the election definition file in a
4 way that allows the attacker to overwrite other files on the
5 BMD when the election definition is loaded.

6 So there's no readily observable thing that is wrong with
7 the election definition, but when the election definition is
8 loaded in the normal course of setting up the BMD for an
9 election, the attacker gets the ability to overwrite another
10 part of the data on the system.

11 **Q.** Make sure I understood here, sir.

12 This vulnerability means that one can use an election
13 definition file to sneak a file anywhere onto the BMD; correct?

14 **A.** To slip in this extra file into the election definition in
15 a way that it can overwrite some part of the BMD's memory that
16 is not the election definition itself.

17 **Q.** Could you please explain what Vulnerability Number 9 is.
18 That is CVE 2022-1744.

19 **A.** So Vulnerability 9 can be used in conjunction with
20 Vulnerability 8 to allow that specially modified election
21 definition file to execute malicious code and gain superuser
22 access on the BMD without even showing an on-screen prompt.

23 **Q.** At a really high level, Vulnerabilities 8 and 9 means that
24 one can use the election definition file to sneak malware onto
25 a machine and replace or supplant the existing Dominion

1 software; is that fair?

2 **A.** That is right. It is possible to make particular changes
3 to an election definition file that will make it so when that
4 election definition file is loaded onto a BMD, the BMD will be
5 infected with malware from the election definition file.

6 **Q.** Who would have the access as --

7 MR. ANDREU-VON EUW: Tony, can we go back to Slide 7,
8 please?

9 BY MR. ANDREU-VON EUW:

10 **Q.** Who would have the access necessary to get an infected
11 election definition file into the distribution chain you have
12 described?

13 MR. TYSON: And, Your Honor, I'll object again on
14 disclosure. I don't believe that topic is in Dr. Halderman's
15 report, and I don't think there is a foundation about his
16 knowledge of the various structures of who would have access to
17 these systems.

18 MR. ANDREU-VON EUW: I think it is discussed in his
19 Coffee County declaration, at least, Your Honor.

20 THE COURT: Do you want to look at it?

21 MR. TYSON: I've got it right here.

22 THE COURT: Is it in the -- I'm not sure where I have
23 it, but I have his report here. I'm not sure I have that other
24 affidavit here.

25 I may. Is it a number?

1 MR. TYSON: And, Your Honor, to be clear, I believe
2 Paragraph 69 of Dr. Halderman's Coffee County declaration talks
3 about, for example, insiders.

4 But the question was, who would have the access
5 necessary to get an infected election definition file, which I
6 think is a broader question, so --

7 MR. ANDREU-VON EUW: Thank you.

8 Maybe it is a poor question. Let me ask a simpler
9 question.

10 BY MR. ANDREU-VON EUW:

11 **Q.** Would election insiders have the access required to infect
12 an EMS or swap out the files -- excuse me. Let me ask a clear
13 question.

14 Would election insiders have the access necessary to
15 insert an infected election definition file into the
16 distribution chain you described?

17 **A.** Yes.

18 **Q.** Okay. Would outside parties who broke in or otherwise
19 obtained physical access to an EMS computer be able to insert
20 an infected definition file into the supply chain?

21 **A.** Yes.

22 **Q.** How would an election insider install malware on an EMS
23 using this technique?

24 **A.** Excuse me. Install malware on an EMS using --

25 **Q.** I said -- yeah, how would an election insider install an

1 infected election definition file into the supply chain? What
2 steps would they take?

3 **A.** Well, an insider who was an insider who wanted to attack
4 the system -- so this would have to be someone dishonest --
5 would have the -- would simply replace the election definition
6 file on the county EMS with one that had been modified.

7 Now, that could mean copying the file out and having
8 someone more sophisticated modify it and then putting it back
9 in. This would have to be done before the malware -- excuse
10 me -- the election definition was distributed to the BMDs.

11 **Q.** Okay. Now, earlier this week, Mr. Sterling said that the
12 State does logic and accuracy testing to protect from a bad
13 actor in the State.

14 Do you have a reaction to that?

15 **A.** Yes. So I think Mr. Sterling was acknowledging that it is
16 also at least a possibility that a dishonest insider at the --
17 with access to the Secretary of State's systems at the Center
18 for Election Systems could modify election definitions before
19 they were sent to counties. That is my understanding of what
20 he was reacting to. And he suggested that logic and accuracy
21 testing on the county level would defend against that.

22 I don't think logic and accuracy testing is at all an
23 effective countermeasure against that threat. Although I think
24 it is commendable that he is at least considering the threat as
25 something that requires a countermeasure.

1 Q. Why do you think that logic and accuracy testing is not
2 sufficient?

3 A. So logic and accuracy testing, in general, can be defeated
4 by malware running on a voting device because there are many
5 different ways that you could program malware to either
6 recognize that -- to recognize that it is under test and only
7 cheat under circumstances that are not part of the L&A test.

8 In Georgia specifically, the logic and accuracy procedures
9 only require a single ballot to be cast on each ballot-marking
10 device and printed, and so a very simple way for malware to
11 avoid that test would be to not cheat until after the first
12 ballot had been cast.

13 And, in fact, the malware demonstrated in the video you
14 just saw waited until after the first ballot was cast after it
15 was installed to begin cheating just in case that was part of
16 an L&A test.

17 But more sophisticated malware could do things such as
18 just look at the date and time to see whether it was before or
19 during election day and only cheat if it was the middle of
20 election day, as one example.

21 Q. How could remote attackers with no physical access install
22 an infected election definition file?

23 A. I'm sorry. I don't think I heard your question.

24 Q. Could remote attackers with no physical access install an
25 infected election definition file?

1 **A.** Without physical access to the EMS system, you mean?

2 **Q.** Correct.

3 **A.** Yes. So that is also certainly a potential threat. A
4 remote actor could try to exploit the vulnerabilities that
5 we've just been talking about to spread malware through the
6 election definition files by first infecting a county or state
7 election management system with a different form of malware
8 that would modify the files. And that infection could be done,
9 for instance, using a Stuxnet style attack to try to spread
10 malware from some other internet-connected system to the EMS
11 computer on USB sticks that workers use to move data back and
12 forth.

13 **Q.** What is a Stuxnet style attack?

14 **A.** Well, Stuxnet famously was a form of computer malware
15 created to sabotage the Iranian nuclear enrichment program. It
16 worked by -- the enrichment centrifuges were controlled by
17 computers that were not connected to any external networks,
18 much like the EMS computers are supposed to not be connected to
19 any external networks.

20 **Q.** That's what has been described as air-gapped in this case
21 previously?

22 **A.** Yes.

23 **Q.** Okay.

24 **A.** So the Stuxnet campaign spread -- the Stuxnet campaign
25 involved malware that was designed to infect USB sticks that

1 were connected to a computer that had the Stuxnet malware
2 running on them. And then if those USB sticks were moved to
3 another computer, that computer would automatically and with no
4 user interaction become infected with the Stuxnet malware too.

5 So it spread as a kind of a computer worm or virus on USB
6 sticks into air-gapped environments and then proceeded to --
7 when it found it was on -- when it found it was in the
8 air-gapped environment that was being targeted, as part of the
9 sabotage campaign, the malware would proceed to execute other
10 commands that would disrupt the enrichment centrifuges.

11 **Q.** So at a high level, USB sticks were used to infiltrate the
12 air gaps in Iran's nuclear enrichment computers?

13 **A.** That is right.

14 **Q.** Were you aware that during yesterday's hearing, Mr. Maggio
15 testified that SullivanStrickler tested the USB sticks they
16 used in Coffee County using antivirus from Kaspersky?

17 **A.** I am aware.

18 THE COURT: I didn't hear the last word.

19 MR. ANDREU-VON EUW: Using USB software from -- using
20 antivirus software from Kaspersky.

21 And I would like to commend the court reporter for
22 getting that in the transcript last night.

23 THE COURT: She's marvelous.

24 THE WITNESS: Yes. I did review that part of his
25 testimony.

1 BY MR. ANDREU-VON EUW:

2 Q. Did it cause you concern?

3 A. Yes. It is concerning because at the time that the Coffee
4 County incident took place, well, the Kaspersky antivirus had
5 been -- already been banned from use on any federal government
6 agency computers because the -- the Russian-owned company was
7 regarded as a potential threat to national security.

8 Part of the concern is that it is antivirus software
9 specifically, and antivirus software has access to all of the
10 files and data on a computer necessarily for its operation. It
11 also receives software updates on a very frequent basis; daily,
12 if not more often.

13 And so the concern with the Kaspersky tool was that it
14 might be possible for the company to remotely update instances
15 of that software in order to carry out a malicious campaign
16 against high-value targets.

17 So I think it is concerning that that software was used by
18 SullivanStrickler on devices from which USB sticks were being
19 directly attached to the Coffee County EMS.

20 Q. So you said, just to summarize, antivirus software has
21 access to all of the files and all of the data on a computer
22 necessarily for its operation.

23 Can you explain that?

24 A. Sure. So an antivirus program needs to be able to inspect
25 the other files on your computer in order to tell whether they

1 contain viruses. That requires a very permissive level of
2 access to the data on a computer, and it usually requires
3 access to external devices that are plugged into your computer.
4 Your computer's configuration will be such that the antivirus
5 software has -- essentially has superuser access to the
6 computer.

7 **Q.** And you also said that antivirus software received
8 software updates on a very frequent basis -- excuse me --
9 daily, if not more often.

10 Can you explain why that is and why that concerns you?

11 **A.** Antivirus software, in typical practice, is updated
12 frequently in order to allow the software to detect new threats
13 that have been discovered and analyzed by the antivirus
14 company. And that takes the form of an antivirus definition
15 that gets delivered over the internet to the antivirus software
16 from the manufacturer. But those antivirus definition files
17 can contain code updates for the antivirus software too to
18 change its functionality.

19 **Q.** So in some -- the concern of the Kaspersky is that it is
20 software that has full control, essentially, over a computer
21 that is remotely controlled through updates by a Russian
22 company that could be potentially influenced or controlled by
23 the Russian government?

24 **A.** That is my understanding of the basis for the federal
25 government prohibiting Kaspersky antivirus software on federal

1 computers, exactly that concern, that it was potentially a
2 threat to national security.

3 **Q.** And how could Kaspersky antivirus software be used to
4 carry out a Stuxnet style attack?

5 **A.** So it could be used to infect the SullivanStrickler
6 computer with malicious software that would then write -- that
7 would then infect USB sticks plugged into that computer, and
8 those infected USB sticks, if plugged into another computer,
9 would infect that other computer even if it was a disconnected
10 system with no network path to the rest of the world.

11 **Q.** Now, are your opinions about the threats of advanced --

12 COURT REPORTER: Please slow down.

13 MR. ANDREU-VON EUW: Thank you. I'll rephrase --
14 restate my question.

15 BY MR. ANDREU-VON EUW:

16 **Q.** Are your opinions about the threat posed by advanced
17 actors, such as nation-states, limited to infection via
18 antivirus software?

19 **A.** No. There are other means by which such infection could
20 take place. And, in fact, nation-states, unfortunately,
21 frequently do infect internet-connected computers via a variety
22 of methods.

23 **Q.** Have you reviewed any evidence as to whether Georgia's EMS
24 servers are vulnerable to this sort of attack, all the sorts of
25 attacks we've been discussing in the context of

1 Vulnerabilities 8 and 9?

2 **A.** Have I -- excuse me.

3 Can you state that again?

4 **Q.** Yes. Have you reviewed any evidence that informs your
5 opinion as to whether Georgia's EMS servers are vulnerable to
6 the types of remote attacks we've been discussing or any
7 attacks we've been discussing?

8 **A.** Yes, I have.

9 **Q.** What evidence did you review?

10 **A.** I reviewed a copy of the Coffee County EMS server hard
11 drive that SullivanStrickler created and produced to the
12 Curling Plaintiffs.

13 **Q.** Do you know how that hard drive image was obtained?

14 **A.** It was obtained during the Coffee County incident.

15 **Q.** Okay. Did you prepare a slide summarizing your findings?

16 **A.** I did.

17 MR. ANDREU-VON EUW: Tony, can we have
18 Slide Number 8?

19 BY MR. ANDREU-VON EUW:

20 **Q.** At a high level, what does this slide show?

21 **A.** The plaintiffs asked me to review the EMS server hard
22 drive to understand whether there were vulnerabilities in the
23 system configuration that might allow attackers to compromise
24 the EMS, and this slide is a summary of vulnerabilities that I
25 identified.

1 Q. Do any of the vulnerabilities listed on this slide raise
2 concerns with respect to access by insiders?

3 A. Yes. So the first three on that list at the Coffee County
4 EMS was configured in such a way that all of the normal users
5 used the same account with a single password.

6 Q. Why is that a concern?

7 A. Well, because if -- if one of those users did some action
8 that compromised the server, it wouldn't be possible to
9 identify which one.

10 Q. Any other of these vulnerabilities raise concerns with
11 respect to access by insiders?

12 A. Yes. Vulnerability 2 on the list is that that shared user
13 account had what is called on Windows administrator access.
14 This is the Windows form of superuser access. It had the
15 ability to override the operating system's security controls
16 and install new software, change the software, change any of
17 the data.

18 Vulnerability 3 is essentially equivalent to superuser
19 access over the database files that are the core repository for
20 the Dominion EMS software, which would give an analogous
21 ability to override the security controls and passwords that
22 are built into the Dominion software.

23 THE COURT: And you're talking about somebody who is
24 in a management position who would have that type of direct
25 access to the database?

1 THE WITNESS: So it is not limited to someone in a
2 management position. It would be anyone who was a user who
3 could log into the shared EMS account could get that ability to
4 have direct database access just by opening a database
5 management application that was installed on the PC.

6 BY MR. ANDREU-VON EUW:

7 **Q.** Do any of the vulnerabilities here present concerns with
8 respect to an insider with physical access but without
9 permission to use the computers?

10 **A.** Yes. The -- the next two on the list do.

11 So the EMS was configured without encryption for the hard
12 drives and without what is called a BIOS password when the
13 computer starts. As a result of this, someone who had physical
14 access to the EMS computer but not the password to log in could
15 bypass the password and be able to arbitrarily change any of
16 the files or programs, including changing election definition
17 files or infecting the EMS with malicious software.

18 **Q.** Do any of these vulnerabilities raise concern with respect
19 to others -- with respect to remote attackers?

20 **A.** Yes. So the last three vulnerabilities on the list
21 include the fact that the Microsoft Windows installation on the
22 EMS server was a version of Windows that dated from -- I
23 believe it was 2015, and it had never received any security
24 patches in that time.

25 The antivirus software installed on the machine, Windows

1 Defender, had antivirus definitions that were more than a year
2 out of date, and as a result of that, the system contained a
3 large number of known and unpatched vulnerabilities and not
4 antivirus updates that would cover even known malware, let
5 alone malware specially crafted for the purpose of attacking
6 the server.

7 Among the vulnerabilities in Windows that were not patched
8 was a known vulnerability that Microsoft had categorized as
9 critical that would allow malicious software to automatically
10 launch and install itself from a USB stick, exactly the sort of
11 vulnerability that would enable a Stuxnet style attack if an
12 infected USB stick was attached.

13 **Q.** So just to be clear, the EMS server you examined had a
14 known vulnerability about being specifically vulnerable to USB
15 attacks?

16 **A.** Yes. A known and unpatched vulnerability in Windows.

17 **Q.** Did you see anything to indicate whether other counties
18 would have the same vulnerabilities?

19 **A.** Yes.

20 MR. TYSON: Your Honor, I'm sorry. I'll object here.
21 I don't believe this is part of Dr. Halderman's Coffee County
22 declaration. He's moving from Coffee County's EMS to all
23 Georgia EMSs, and I think we at least need foundation, and I
24 think it is beyond the scope of his reports.

25 MR. ANDREU-VON EUW: Let me make my question a

1 littler clearer.

2 BY MR. ANDREU-VON EUW:

3 **Q.** Did anything on the Coffee County EMS server give you any
4 reason to believe one way or the other whether other counties
5 would have the same vulnerabilities?

6 **A.** Yes. As I describe in my declaration about Coffee County,
7 I found evidence in the way the system was set up that suggests
8 county EMSs were created from a standard image or template, so
9 other county EMSs likely do share most or all of these
10 vulnerabilities.

11 **Q.** Now, you also reviewed evidence about the Coffee County
12 intrusion more broadly than just one EMS server image; correct?

13 **A.** Yes, I did.

14 **Q.** Do you know what access the Coffee County intruders had --
15 what level access they had?

16 **A.** Oh, they had a very great level of access. The data that
17 they took included not only data from the EMS server, a
18 complete copy of the EMS server, but also a complete copy of
19 the central count scanner workstation of a laptop that was used
20 for ballot preparation or printing, I believe.

21 They took the most critical piece of the ICX BMD software.
22 They got a version of the software that operates the ballot
23 scanners. They imaged numerous pieces of removable media,
24 including USB sticks and memory cards used with the election
25 equipment.

1 And beyond -- and this required attaching external
2 devices. This would have required attaching external devices
3 to these different pieces of equipment, of the Poll Pads as
4 well.

5 So just from the data alone, you can tell that this was a
6 very large degree of access.

7 **Q.** How does the access the Coffee County actors had compare
8 to the access you had?

9 **A.** Well, it was significantly more access than I had. I only
10 had access to this single BMD and single scanner from Fulton
11 County which were provided under the Court's authority before
12 they were ever used in a real Fulton County election and which
13 will, I hope, never be used in a real election in the future.

14 In contrast, in Coffee County, they had access to the live
15 election system, to systems that had real voter data, and not
16 only to a single BMD and scanner, but to the EMS itself.

17 I never received access to Georgia EMS Image until after
18 the -- after the Coffee County incident came to light.

19 And so they had much more access, a much more dangerous
20 kind of access.

21 **Q.** In your opinion, has the theft and distribution of data in
22 Coffee County affected the security of future Georgia
23 elections?

24 **A.** Well, yes. And this is what is dangerous about it, that
25 the access in Coffee County -- well, unfortunately, the -- we

1 now know that the data from Coffee County that was taken has
2 been distributed to a large group of -- a large group of
3 people. Probably the total number of people who received
4 copies is impossible to determine because individuals involved
5 shared their passwords or may have further disseminated the
6 data.

7 But the data that they took -- the data that they took
8 would be sufficient to rediscover really almost any of the
9 attacks, maybe any of the attacks -- excuse me -- any of the
10 vulnerabilities that CISA has validated here. There are
11 potentially -- the data would also allow the attackers to study
12 Georgia's exact configuration of the EMS and other equipment to
13 replicate that configuration and then to develop and test
14 malware or exploits for these vulnerabilities at their leisure.

15 And that infiltration, the incident in Coffee County took
16 place what -- it has been three years now since that incident
17 took place. It is far, far more time than I had to work with
18 any of the equipment.

19 **Q.** Dr. Halderman, do you have any opinion on the ways Georgia
20 could mitigate the vulnerabilities you have identified and CISA
21 validated?

22 **A.** Pardon me? Can you say that again?

23 **Q.** Yeah. Do you have an opinion on the ways Georgia could
24 mitigate the vulnerabilities you have identified?

25 **A.** Could mitigate the vulnerabilities?

1 Q. Yes. Yes.

2 A. Well, the -- I think the vulnerabilities -- the
3 vulnerabilities that are described in my report, the way -- the
4 way that Georgia could mitigate them most directly would be by
5 adopting a system involving hand-marked paper ballots which
6 then couldn't be altered by malicious software on the BMDs. By
7 minimizing the use of BMDs and relying on them only for voters
8 who need them, Georgia could make the BMDs much less of a
9 target, and that would be protective of people who still need
10 to use the BMDs even if they are -- the risks or the
11 vulnerabilities remained as they are now.

12 Q. Thank you.

13 We almost missed the last entry on your list of
14 vulnerabilities.

15 Can you explain Vulnerability Number 10, CISA CVE
16 Number 2022-1740?

17 A. Yes. So this is another vulnerability in the design of
18 the ICX. The ICX provides certain functions for the purpose of
19 verifying whether the software that is installed has been -- is
20 the genuine software or whether it may have been replaced with
21 malicious software. This vulnerability is that those
22 mechanisms don't work. There is a way for malicious software
23 to lie about its presence on the system and evade those methods
24 of detection.

25 Q. You identified a number of vulnerabilities in these BMDs.

1 Do you have any opinions as to whether there are other
2 vulnerabilities?

3 **A.** Oh, yes, I'm quite certain that there must be other
4 vulnerabilities that I haven't identified.

5 So my methodology -- my methodology cannot exhaustively
6 find all of the vulnerabilities in such a system, but moreover,
7 I had limited time to work with the device before my expert
8 report was done.

9 Once I found a vulnerability of note affecting a certain
10 component or subsystem of the device, I moved on to look at
11 other components rather than trying to find more that might be
12 equivalent and affected that original component. It would take
13 much more time and many more resources to hope to find all of
14 the vulnerabilities affecting it.

15 And I'll note that my original plan was to first find all
16 of the vulnerabilities that I could in the time available
17 without opening the device and then to open it and proceed to
18 look for even more things, but I never got to that second step
19 of looking at vulnerabilities that one could find after opening
20 the device.

21 **Q.** Were you here for opening statements?

22 **A.** I was.

23 **Q.** Do you recall that in opening statement Mr. Tyson listed
24 other jurisdictions that used BMDs for in-person voting?

25 **A.** Yes.

1 Q. You listed, I believe, Los Angeles and San Diego,
2 California, and then South Carolina, Arkansas, and huge
3 portions of Texas; correct?

4 A. Yes.

5 Q. Do any of these jurisdictions use Dominion BMDs as their
6 primary form of voting?

7 A. No.

8 Q. Do you know how many counties do use Dominion BMDs --
9 Dominion ICX BMDs as the primary form of voting?

10 A. I reviewed the latest data from Verified Voting, and it
11 appears that outside of Georgia, there are only seven counties
12 in the United States that use the ICX as the primary form of
13 voting.

14 MR. TYSON: And, Your Honor, I'll just move to strike
15 that answer. Dr. Halderman indicated he is relying on another
16 source for that information. I think we need to bring that
17 source in if he is going to rely on that for his testimony.

18 THE COURT: Okay. Well, I feel sure he is going to
19 still be here tomorrow, so maybe he can bring that source to
20 light then and share it beforehand with all counsel and the
21 Court.

22 MR. ANDREU-VON EUW: We can do that, Your Honor.

23 BY MR. ANDREU-VON EUW:

24 Q. So, Your Honor -- excuse me -- Dr. Halderman, in closing,
25 who could implement the hacks you designed in future elections?

1 **A.** Well, so the attacks that -- the kinds of attacks that I
2 described might take someone technical to develop, but once the
3 attacks are developed by someone technical, they could recruit
4 almost anyone to implement them and put them into practice.
5 And, frankly, you know, we worry about -- we have worried about
6 things like nation-state threats to voting for a long time, but
7 those are not the only threats that election systems base.

8 Beyond the nation-state wanting to perhaps change results,
9 there are all kinds of politically motivated attackers who
10 would be glad to affect a result, but even happier or as happy
11 just to cause chaos.

12 So what really keeps me up at night -- one of the things
13 that really keeps me up at night is looking at just how easy to
14 attack this system can be for someone, potentially even a
15 voter, to walk up to it with a pen, stick in a card, something
16 like that.

17 Well, what keeps me up at night is, what if some fanatics
18 on the internet, you know, recruit a few dozen people to go
19 around a state like Georgia on election day and program BMDs
20 even in a simple way that will really visibly swap votes?

21 Well, what would the result be? It would be chaos, and it
22 would take tremendous work to figure out the full scope of that
23 chaos. You would have to go and inspect every single BMD to
24 see if something was wrong. And you probably couldn't know for
25 sure, even with a careful inspection, how many BMDs have

1 actually been affected.

2 And if just one BMD at a polling place has been
3 malfunctioning, maybe eventually some voter notices something
4 is wrong, but by that time, voters' ballots will be in a ballot
5 box from people who didn't notice the problem.

6 And you can't go back and fix that. The entire -- any
7 ballot in the whole polling place might have been affected.

8 So all of these things worry me, Mr. Andreu, just how easy
9 this machine is to tamper with. It is so far from what would
10 be a secure system.

11 MR. ANDREU-VON EUW: Thank you, Dr. Halderman. I
12 have no further questions for you.

13 THE COURT: Do you need a restroom break?

14 THE WITNESS: Please.

15 THE COURT: Okay.

16 MR. CROSS: Your Honor, before we do that, could I
17 just respond real quickly to Mr. Tyson?

18 We had another case dropped on us, but we did find
19 it. It was -- *United States v. NortonLifeLock* is the one you
20 cited; right, Bryan?

21 MR. TYSON: That's right.

22 MR. CROSS: So we took a look at this, Your Honor.
23 Again, it is nowhere near on point. The objection there had
24 nothing to do with it being a demonstrative. The objection
25 there was that the demonstrative had an entirely new damages

1 calculation.

2 So it wasn't that it was a demonstrative, it was the
3 substance of it, which the court did keep out because it was an
4 entirely new opinion and an entirely new approach. There has
5 been no suggestion of that here.

6 In fact, Mr. Tyson acknowledged in his objection, his
7 words, the concepts -- the opinions in these demonstratives are
8 fully captured in the report.

9 And we did find another case. I'm going to spell
10 this because I don't know how to say it -- *Z-A-U-K-A-R v.*
11 *United States*. This is from January 21 of 2022, in Alaska,
12 where the court directly rejects the State's position here,
13 which, again, is clear on the face of Rule 26 because it talks
14 about exhibits, not demonstratives.

15 But the Court says demonstrative exhibits that merely
16 support an expert's analysis or demonstrate existing expert
17 opinion in the record do not fall within the scope of
18 Rule 26(a)(2)(B)'s pretrial disclosure requirements.

19 The Court then goes on to reject an objection under
20 that rule to a demonstrative and indicates the Court will
21 consider the demonstrative for demonstrative purposes as we
22 have sought here.

23 THE COURT: And what is the citation?

24 MR. CROSS: Oh, yes, thank you, Your Honor.

25 It is -- it is 2022 Westlaw, WL, 198714. That

1 discussion is at the end of the case at star 8, Your Honor.

2 Judge, I can give you the decision if I can approach.

3 THE COURT: Thank you.

4 All right. We're going to take a break of a few
5 minutes. I saw that Mr. Oles had something he wanted to say,
6 but I had directed that he talk with other counsel before he
7 proceeds.

8 Anything else before we turn it over to you?

9 MR. TYSON: Your Honor, I was just going to note that
10 I'm definitely not going to finish today.

11 THE COURT: I know that.

12 MR. TYSON: So I was wondering, do you want me to
13 take the evening and see if I can shorten this up and start in
14 the morning? Do you want me to see how far I can get?

15 I hate to stop in the middle of cross if we can, but
16 I'll take the Court's direction on that.

17 MR. CROSS: We should start today, Your Honor,
18 because we want to wrap our case up tomorrow, and we still have
19 got an hour. We need to get done today.

20 THE COURT: All right.

21 MR. CROSS: Thank you, your Honor.

22 MR. BELINFANTE: Your Honor --

23 THE COURT: Yes.

24 MR. BELINFANTE: -- given what Mr. Cross indicated, I
25 would like to raise a housekeeping matter that I think we've

1 discussed internally and have very limited conversation with
2 the other side about.

3 Tomorrow seems relatively unpredictable given the
4 list of witnesses that would be there. One thing we would like
5 the Court to consider is that the State would not be expected
6 to start its case until Monday.

7 THE COURT: That's fine.

8 MR. CROSS: And we don't have an objection to that
9 given where we are.

10 THE COURT: I didn't expect that, that you would.

11 MR. CROSS: That's fine.

12 MR. BELINFANTE: Thank you, Your Honor.

13 THE COURT: I just expected the cross-examination to
14 go for a substantial amount of time and the redirect to go, and
15 I don't know whether you have any other witnesses after this.

16 MR. CROSS: We have two experts, at least one
17 plaintiff.

18 THE COURT: Yeah.

19 MR. CROSS: The two plaintiffs are short, the two
20 experts --

21 THE COURT: All right. Okay.

22 MR. CROSS: Thank you, Your Honor.

23 THE COURT: Let's take a five-minute break.

24 **(A brief break was taken at 4:33 PM.)**

25 THE COURT: Have a seat. Let me just say it is 20 of

1 5:00, and while I'm allowing -- basically saying, let's
2 proceed, there is no way we're going past 5:30. We would be
3 killing our most valuable resource here, is our court reporter,
4 and so that is -- and if we get to a natural stopping point in
5 half an hour, we're stopping there. So let's not begin a new
6 topic when -- go with what you have got.

7 And just before you stand, were you able to address
8 whatever -- did you confer and did Mr. Oles confer with
9 counsel?

10 MR. OLES: Go ahead.

11 MR. CROSS: Go ahead.

12 MR. OLES: Yes, we did, Judge. And I was satisfied
13 on most points, but there are two questions that were not
14 asked.

15 THE COURT: All right. Do you want to come up here
16 and tell me your questions with the rest of the -- with all
17 counsel? That is fine.

18 **(A bench conference ensued, as follows:)**

19 MR. OLES: Thank you, Judge.

20 Judge, we were down to two questions. And as the
21 Court knows, my issue has been that the system goes from the
22 BMD to the scanner. And the Court has found that is within
23 scope.

24 The question I would like to ask is whether or not
25 the doctor can say that -- confirm that the system is unable to

1 detect photocopies of duplicate ballots and that -- and that
2 weakness occurs both on the in-person ICP [sic] scanner as well
3 as the mail-in ballot ICC scanner -- that is really the point
4 that I would like him to address.

5 MR. CROSS: The reason we're not asking --

6 THE COURT: Folks, can you be quiet so I can hear
7 the -- counsel? Thank you.

8 MR. CROSS: The reason we're not asking is because it
9 has no relevance to the claims because it goes to the
10 reliability of the scanner, and no one is seeking to eliminate
11 the scanner except for Mr. Favorito, and he is not a party.
12 They want a hand count. That is not this case.

13 THE COURT: All right. Well, I think that is an
14 adequate basis for me to -- in addition, I would say, it is a
15 whole separate issue about the scanner being able to detect
16 voter copies of duplicate ballots. You just -- they haven't
17 litigated that. So if that was something that your client
18 wanted to happen, it needed to have been raised a long time
19 ago. It would be a -- it is sort of outside baseball at the
20 moment.

21 So I appreciate your raising it in this way and --
22 but I'm going to decline to allow it. Thank you.

23 MR. CROSS: Thank you, Your Honor.

24 MR. OLES: Thank you, Your Honor. Thank you for
25 considering it.

1 **(The bench conference was thereby concluded.)**

2 THE COURT: Who is at bat? You are?

3 MR. TYSON: Yes, Your Honor. Thank you, Your Honor.

4 CROSS-EXAMINATION

5 BY MR. TYSON:

6 **Q.** Good afternoon, again, Dr. Halderman.

7 **A.** Good afternoon, Mr. Tyson.

8 **Q.** What I would like to begin our discussion is with what you
9 are not offering opinions about and what you don't have
10 evidence about in this case.

11 So you are not offering the opinion in this case that any
12 vulnerability in a DRE has been exploited to alter election
13 results in an actual election; right?

14 **A.** No. There's no evidence that a vulnerability in a -- you
15 said a DRE, has ever been exploited to change votes in an
16 actual election.

17 **Q.** Okay. And you have no evidence that any vulnerability in
18 a DRE has been exploited to alter election results in an actual
19 election; right?

20 **A.** There is no evidence, to my knowledge, that a
21 vulnerability in a -- in a DRE has been exploited to -- to
22 alter an actual election.

23 The concern is forward-looking about elections in the
24 future and the risks that they face.

25 **Q.** And you have --

1 THE COURT: Are you using DRE to refer to anything
2 where there is a computer involved, or are you referring to the
3 original DRE system?

4 MR. TYSON: So, Your Honor, I was referring
5 specifically to the original AccuVote TSx units. I know one of
6 the claims -- the DRE claims have been dismissed, but the
7 plaintiffs have raised concerns about there being something
8 carrying over. I just wanted to establish if there is evidence
9 of that.

10 THE COURT: I think what the claims really related to
11 were the -- was the information in the voting database rather
12 than the DRE itself at -- at the point that there was the
13 transition.

14 So it might -- I'm not sure your question is
15 really -- totally conforms with what they have argued.

16 MR. TYSON: And if that is what they are arguing, I'm
17 happy to talk about voter registration system. That is my next
18 topic.

19 THE COURT: I don't want to have misstated what
20 plaintiffs think their claims are relative -- their outstanding
21 issues were regarding the DRE.

22 So if there is something else?

23 MR. ANDREU-VON EUW: No, Your Honor.

24 THE COURT: What about the Coalition?

25 MR. MCGUIRE: If we have questions or -- I'm sorry, I

1 missed -- I'm sorry, Your Honor.

2 THE COURT: Counsel asked the witness did he -- was
3 asking him questions about the DRE and did it -- and did he
4 have concerns or evidence that it had impacted an election or
5 been a cause for concern as to malware.

6 And I indicated -- I asked to clarify, are we talking
7 about DREs as a group of machines that encompassed the current
8 machines, or is it really the old DREs?

9 He then -- and then Mr. Tyson said he meant the old
10 DREs. And I said, my understanding was what you were
11 contending was being carried forward was problems and flaws in
12 the voter database.

13 And that is why the way I understood it, at least
14 until recently when there has been a change in the -- in the
15 whole software for the voter database. But I know originally,
16 in the last number of years before it was changed, at least,
17 that was your position. I don't know whether it is still now.

18 So that is what I was asking, so that -- for
19 clarification about what are we talking about.

20 MR. McGUIRE: Our position has been throughout the
21 litigation that the old system had vulnerabilities and that
22 certain aspects of the old system were shared with the new
23 system, some hardware, but mainly through the passover from the
24 old voter registration system to what is used now.

25 So as far as DREs go, we understand that is over, so

1 we are not continuing to rely on the DRE issue.

2 THE COURT: All right. So if you maintain still that
3 there are issues about the carryover on the voter database,
4 then I'll let you go ahead. That may still be a totally
5 different machine. I don't know what is going to be
6 maintained.

7 MR. TYSON: Certainly, Your Honor. Thank you.

8 BY MR. TYSON:

9 Q. Dr. Halderman, you're not offering the opinion in this
10 case that any vulnerability in the State's prior voter
11 registration system, referred to as eNet, has been exploited to
12 alter information in an actual election; right?

13 A. No. That's not an opinion I'm offering.

14 Q. Okay. And you have no evidence that any vulnerability in
15 the State's prior voter registration system, eNet, has been
16 exploited to alter information in an actual election; right?

17 A. Yes.

18 Q. And you have no evidence that any malware was ever
19 installed on eNet; right?

20 A. On eNet?

21 I have not had an opportunity to inspect eNet-related
22 infrastructure for malware, but no, I don't have any evidence.

23 Q. And you're not offering the opinion in this case that any
24 vulnerability in a Dominion ICX BMD has been exploited to alter
25 election results in an actual election; right?

1 **A.** No. The opinion -- the -- what I'm talking about is the
2 risk going forward.

3 **Q.** And so you have no evidence that any vulnerability in a
4 Dominion ICX BMD has been exploited to alter election results
5 in an actual election; right?

6 **A.** I don't think there is any good evidence of that
7 happening -- happened in a past election.

8 **Q.** And to be clear, you don't have any evidence, or you don't
9 have any good evidence?

10 **A.** Any evidence. Any -- any evidence that is -- that is at
11 all convincing.

12 **Q.** What evidence do you have that you feel is not convincing?

13 **A.** Oh, the evidence that I have, I just mean false claims.

14 **Q.** So it is your testimony that the only evidence that could
15 exist about manipulating a Dominion ICX in an actual election
16 is a false claim?

17 **A.** I don't think that is what I said, no.

18 THE COURT: Do you want to explain what you said?

19 THE WITNESS: Mr. Tyson, what I said was that I
20 have -- to my knowledge, there is no evidence that shows any of
21 these vulnerabilities has ever been exploited against a real
22 election. We're talking about prospective risks. There have
23 been -- there have been false claims or conspiracy theories
24 about past elections that talk about vulnerabilities and
25 Dominion systems, but I don't find those credible to the extent

1 I have reviewed them.

2 BY MR. TYSON:

3 **Q.** And you have, on the same line, no evidence that any
4 vulnerability in a Dominion election management server has ever
5 been exploited to alter election results in an actual election?

6 **A.** Yes.

7 **Q.** And you have no evidence that any vulnerability in the
8 State's current voter registration system, referred to as
9 GARViS, has been exploited to alter information in an actual
10 election; right?

11 **A.** That is right.

12 **Q.** And you have no evidence that any malware has ever been
13 installed on GARViS; right?

14 **A.** That's right. I have never inspected the GARViS system.

15 **Q.** And so with your various reports in these cases, you're
16 not offering any evidence that any vulnerability you identified
17 in your reports had been exploited to alter election results in
18 an actual election; right?

19 **A.** That's right. The vulnerabilities I discuss are problems
20 that are present and threaten elections in the future.

21 **Q.** And I know there was some discussion earlier about Coffee
22 County.

23 To be clear, you don't have any evidence that any malware
24 was ever installed on any Coffee County equipment; right?

25 **A.** I haven't had access to the equipment in Coffee County to

1 inspect whether malware was installed. The State never
2 provided that, even after the equipment was taken out of
3 service over the security concerns in Coffee, so no.

4 **Q.** And you agree that it is very possible that no malware at
5 all was installed in Coffee County in 2021; right?

6 **A.** It is possible malware was, or that it was not.

7 **Q.** And you testified earlier you had the images that
8 SullivanStrickler obtained; correct?

9 **A.** Yes.

10 **Q.** And you haven't found malware on those images; correct?

11 **A.** That's correct. I haven't found any. The images only
12 cover some of the places on one of those servers where malware
13 could exist and are only from the point in time when they were
14 taken.

15 **Q.** You referenced earlier the antivirus updates and a
16 definition file.

17 Do you recall that?

18 **A.** Yes.

19 **Q.** And it is your opinion, I believe, in these reports that
20 operating system updates should be applied regularly; right?

21 **A.** My opinion is that the lack of operating system updates
22 creates additional security risk.

23 **Q.** But then regarding antivirus updates, your testimony was
24 that applying those antivirus updates could also create
25 security risks; right?

1 **A.** Well, so there's a sense in which it is true that there
2 can be a risk from applying updates, especially if they are
3 coming from a company that the U.S. Government has determined
4 is a threat to national security, but that doesn't mean in
5 general that antivirus updates were operating without recent
6 antivirus updates is a secure practice.

7 **Q.** So, Dr. Halderman, you agree that all voting systems,
8 including primarily hand-marked paper ballot systems, face
9 cybersecurity risks; right?

10 **A.** Well, cybersecurity risks, certainly there are
11 cybersecurity risks that systems of all kinds must deal with.
12 But some voting systems are designed in ways that are resilient
13 to those.

14 Now, also, of course, it is a matter of degree. Not all
15 voting machines can be hacked with a pen.

16 **Q.** But to be clear, you agree that hand-marked paper ballot
17 systems face cybersecurity risks even if they are different
18 than other systems; right?

19 **A.** Of course. But a hand-marked paper ballot system that is
20 coupled with appropriate audits has a record of the voter's
21 intent that just can't be changed in a cyber attack. That is a
22 material difference, even if there are still risks that have to
23 be -- that have to be addressed.

24 **Q.** You agree that the presence of vulnerabilities does not
25 mean that an election has been compromised; right?

1 **A.** Yes, absolutely, it is a risk of compromise.

2 **Q.** Do you recall that following the 2016 presidential
3 election you urged the Hillary Clinton campaign to seek
4 re-counts in states because of the closeness of some contests?

5 MR. ANDREU-VON EUW: Objection, Your Honor.
6 Relevance outside the scope of Dr. Halderman's opinion in this
7 case.

8 MR. TYSON: Your Honor, I believe it goes to bias and
9 Dr. Halderman's statements at the conclusion of different
10 elections on whether or not he has taken a consistent position
11 on assessing vulnerabilities and threats to elections after
12 they were over.

13 THE COURT: Well, you can ask that. I would prefer
14 you not -- are not getting into any particular race. I mean,
15 you can ask the question, have you opined?

16 And that -- I think that is sort of dragging us
17 into -- I think you can rephrase this so we're not into the
18 mud.

19 BY MR. TYSON:

20 **Q.** Dr. Halderman, have you recommended campaigns seek
21 re-counts following close elections?

22 **A.** Yes, I have.

23 **Q.** And why did you make that recommendation?

24 **A.** Well, I have recommended that following close elections in
25 which otherwise there wouldn't be a re-count of -- excuse me --

1 there wouldn't be any kind of audit or examination of voters'
2 paper ballots where the states sometimes will not conduct any
3 kind of review of those paper ballots absent a challenge from a
4 candidate.

5 And so I have -- I made in one instance those
6 recommendations to a candidate in hopes that an audit -- a
7 re-count substituting for an audit would increase voter
8 confidence in the same way that -- I can finish there.

9 **Q.** And you issued a joint letter with computer scientists on
10 November 16, 2020.

11 Do you recall that?

12 **A.** Yes.

13 MR. TYSON: Your Honor, if I may approach?

14 THE COURT: Yes.

15 BY MR. TYSON:

16 **Q.** Dr. Halderman, I have handed you what we have marked as
17 Defendants' Trial Exhibit 67.

18 Is this the letter you signed with other computer
19 scientists in November 16, 2020?

20 **A.** Yes, it is. This is the letter I helped write.

21 **Q.** And that was my next question.

22 MR. TYSON: Your Honor, I would move the admission of
23 Exhibit 67.

24 MR. ANDREU-VON EUW: Your Honor, this is hearsay, but
25 we have no objection.

1 THE COURT: I'm sorry. You have no objection?

2 MR. ANDREU-VON EUW: No objection.

3 THE COURT: All right.

4 BY MR. TYSON:

5 Q. Dr. Halderman, if you would look with me down to the third
6 paragraph, second sentence, the letter says, merely citing the
7 existence of technical flaws does not establish that an attack
8 occurred, much less that it altered an election outcome. It is
9 simply speculation.

10 Did I read that right?

11 A. Yes.

12 Q. And you agree with that statement today, don't you?

13 A. Yes. Merely because vulnerabilities exist in election
14 systems doesn't mean that they were attacked in any particular
15 past election.

16 Q. And the next sentence, the fourth full paragraph says, the
17 presence of security weaknesses in election infrastructure does
18 not by itself tell us that any election has actually been
19 compromised.

20 Did I read that right?

21 A. Yes, you did.

22 Q. And you agree with that statement today; correct?

23 A. Absolutely.

24 Q. And at the bottom of the first page, the letter refers
25 people looking for facts about election security to the

1 National Academy of Sciences study Securing the Vote.

2 **A.** Yes.

3 **Q.** Is that right?

4 And that study recommends paper-based systems for
5 elections, including ballot-marking devices; right?

6 **A.** That study -- you are right, but the scientific consensus
7 has moved since that time as a result of further research which
8 that study recommended be done that has since been done, so --

9 **Q.** Did the scientific consensus move after November 16, 2020,
10 in your view?

11 **A.** It has continued to move since that time, but even by
12 then, it was starting to, but that doesn't mean that the
13 academy's study has no merit. Just certain pieces of the
14 scientific consensus have evolved since that time. But there's
15 still much -- much merit to material within that study.

16 **Q.** And the National Academy of Sciences, Engineering, and
17 Medicine has not published an additional paper study regarding
18 election equipment since this time that you recommended the
19 Securing the Vote study; right?

20 **A.** No, they haven't.

21 **Q.** Do you recall if that National Academy of Sciences study
22 said the most significant threat to American elections come
23 from efforts to undermine the credibility of election results?

24 MR. ANDREU-VON EUW: Objection. Hearsay.

25 MR. TYSON: I asked him if he recalled, Your Honor.

1 I didn't ask if --

2 THE WITNESS: I don't recall.

3 BY MR. TYSON:

4 Q. So, Dr. Halderman, you referenced in your testimony
5 earlier analysis you did in Antrim County, Michigan.

6 Do you recall that?

7 A. Yes.

8 Q. And is that the only time you've analyzed Dominion
9 equipment in another jurisdiction besides Georgia?

10 A. I'm trying to remember. That would certainly be the
11 most -- the most recent. There may be work that I have done on
12 older versions of older forms of Dominion equipment and of
13 equipment that they subsequently bought after my research.

14 Q. And I believe you said that Antrim County runs the same
15 version of Dominion software that Georgia does.

16 Did I get that right?

17 A. Yes.

18 Q. And you were asked to analyze some anomalous election
19 results from that Dominion equipment; right?

20 A. Yes, that is right.

21 Q. Can you explain to the Court what the situation was in
22 Antrim County?

23 A. In Antrim County, the county reported on election night
24 incorrect results for contests really up and down the ballot
25 that showed implausible -- implausible political shifts in the

1 county and so forth.

2 The results triggered -- the results -- the county
3 announced the next day that this was the result of human error
4 and downed the results and proceeded to post new results that
5 corrected some but not all of the errors.

6 And eventually, the -- after further errors were corrected
7 by the county, the State, the State conducted a full hand count
8 of the presidential ballots in order to publicly confirm that
9 the errors hadn't affected the county's result in that contest.

10 There was a lawsuit from a voter alleging that this was
11 the result of fraud. The Michigan Secretary of State and
12 Attorney General responding to that lawsuit hired me to
13 investigate the incident and determine the -- determine the
14 causes and whether they had been corrected and make
15 recommendations.

16 **Q.** And did you issue that report in March of 2021?

17 **A.** Yes, I did.

18 **Q.** And that was before your report in this case; right?

19 **A.** Yes.

20 MR. TYSON: Your Honor, may I approach?

21 THE COURT: Yes.

22 MR. TYSON: Thank you.

23 BY MR. TYSON:

24 **Q.** Dr. Halderman, I have handed to you what we have marked as
25 Defendants' Trial Exhibit Number 1225.

1 Is this the report from Antrim County, Michigan, that you
2 were discussing and that you authored?

3 **A.** Yes.

4 MR. TYSON: We move the admission of 1225, Your
5 Honor.

6 MR. ANDREU-VON EUW: Objection. Relevance and
7 hearsay.

8 THE COURT: Well, I will let him try to establish the
9 relevance of it, and we'll see.

10 MR. TYSON: And, Your Honor, to be clear, it is not
11 hearsay. Dr. Halderman confirmed he wrote this report.

12 THE COURT: I understand that.

13 MR. TYSON: And it involves the same software and
14 analysis he conducted, so we think it is very relevant to his
15 analysis of Georgia equipment as well.

16 BY MR. TYSON:

17 **Q.** Dr. Halderman, if you could turn to Page 10.

18 **A.** Yes.

19 **Q.** And if you look at the last full paragraph there, you are
20 discussing part of your analytical process involving the EMS.

21 Do you see that?

22 **A.** I do.

23 **Q.** And that refers to the election management server?

24 **A.** Yes.

25 **Q.** And about two-thirds of the way down there, you indicate

1 that each election project is individually password-protected.
2 Then you say, however, I circumvented this by creating a new
3 project with a known password, extracting the password hash
4 from the project's database and copying it into the databases
5 for the other projects. Performing similar steps on the real
6 EMS would require physical access to the computer or the hard
7 drive, and I have been informed that Antrim County applies
8 physical controls to limit such access to authorized personnel.

9 Did I read that right?

10 **A.** That's right.

11 I don't comment on the strength of those controls because
12 I didn't have information to make --

13 **Q.** And that was my question.

14 You relied on what you were told about the physical
15 security of Antrim machines for this part of your analysis;
16 right?

17 **A.** No, not really, Mr. Tyson.

18 So this paragraph is not stating whether -- this paragraph
19 is not offering a conclusion about vulnerability in Antrim,
20 Michigan. It is just describing my technique.

21 And in order to -- and I'm qualifying that technique by
22 stating what the requirements would be to -- to do it lest
23 people misunderstand what I am -- what I am writing about here.

24 **Q.** Do you know if third-party groups attempted to access
25 Antrim equipment at any point?

1 **A.** I -- that was not a relevant -- that question, I have no
2 evidence that third party -- well, actually, I'm sorry.

3 So, in fact, SullivanStrickler did image the Antrim County
4 equipment as well in the context of the lawsuit in which I
5 participated.

6 **Q.** Did that happen before or after your report?

7 **A.** That was before my report. I'm not sure I was aware of it
8 at the time.

9 **Q.** You became aware later?

10 **A.** Yes.

11 **Q.** And did that fact change any of your conclusions in your
12 report?

13 **A.** I didn't offer opinions in this report about the risks to
14 future elections that arose from the imaging that
15 SullivanStrickler conducted. That was outside the scope of
16 what I was charged to do.

17 **Q.** Sitting here today, do you believe there are risks to
18 Antrim County elections based on the imaging conducted by
19 SullivanStrickler?

20 **A.** Based on the testimony that was given in this case this
21 week, I believe so. And that is certainly something that I
22 would like to bring up with the Michigan Bureau of Elections.

23 **Q.** If you could turn to Page 45 of this report. This is a
24 section of the report where you are responding to claims from
25 Mr. Ramsland; is that right?

1 **A.** Yes, that's right.

2 **Q.** The first category you discuss there is software updates.

3 **A.** Yes.

4 **Q.** And you note that the report about claims for the Antrim
5 equipment was correct, that the EMS was missing important
6 Windows security updates; right?

7 **A.** Yes.

8 **Q.** And in the second paragraph there that begins, this is a
9 serious security problem, you say, in fact, missing software
10 updates are frequently an unfortunate consequence of the
11 federal certification process under which voting system vendors
12 must obtain EAC approval for any changes to election system
13 software, including Windows updates.

14 Is that right?

15 **A.** So yes, that is what it says.

16 **Q.** And you did not conclude that a lack of Windows updates on
17 the Antrim EMS called the election results in Antrim County
18 into question; right?

19 **A.** No. I concluded that the lack of updates was a serious
20 security risk, but the election results -- the election results
21 were -- my opinion I offered -- my opinions I offer in this
22 report are about whether the -- the cause of the anomalies that
23 were discovered in Antrim County, the known anomalies in Antrim
24 County which are completely explained by human error, as I
25 discuss in this report.

1 Q. And at the end of that section, you say, installing
2 unapproved updates, even for critical vulnerabilities, would
3 potentially violate the system's certification; right?

4 A. Yes.

5 Q. And you still believe that today?

6 A. Well, so that -- yes. So installing -- installing
7 unapproved updates might well cause regulatory problems with
8 certification. That is why -- that doesn't make it any less of
9 a security risk.

10 Fortunately, the Michigan system in Antrim was primarily
11 hand-marked. So even if updates had been exploited, a re-count
12 or an audit by hand of those ballots would still determine the
13 right result, which is, in fact, how the State of Michigan
14 verified the presidential outcome.

15 Q. But to be clear, you agree that sometimes federal
16 regulatory interests would be a reason why updates wouldn't be
17 installed; right?

18 A. I agree. Although that doesn't make it less of a security
19 risk.

20 Q. The next section of this report discusses the security
21 event log and then network connectivity.

22 Do you see those sections?

23 A. Yes.

24 Q. And you relied on the log files in the Dominion EMS to
25 reach the conclusion that it did not appear that the EMS had

1 ever been connected to the internet; right?

2 **A.** Well, I qualify it with "appear," in that there is nothing
3 in the log file. There was nothing in the log file to suggest
4 it. Now --

5 **Q.** And you didn't raise any issues that the log files could
6 have been altered; right?

7 **A.** Again, that was outside the scope of my analysis because
8 my analysis was able to explain the known anomalies.

9 **Q.** The last part of that section on that page discusses
10 authentication and access control, and you reference that
11 Antrim workers --

12 THE COURT: Which page are you on?

13 I want to make sure I understand.

14 MR. TYSON: I'm sorry. Page 45, Your Honor.

15 Mr. Montgomery has got it on the screen if you need it.

16 THE COURT: Okay.

17 BY MR. TYSON:

18 **Q.** Antrim workers almost exclusively used a single Windows
19 account that had full administrative privileges over the
20 computer; is that right?

21 **A.** Yes.

22 **Q.** And going to the next page, the last full paragraph, you
23 say, these problems should be promptly mitigated; however, I am
24 not aware of any credible evidence that any security problem
25 was ever exploited against Antrim County's election system.

1 Did I read that right?

2 **A.** Yes, that's correct.

3 **Q.** And you still believe that today; correct?

4 **A.** Yes. I have no evidence.

5 **Q.** If you could go with me to Page --

6 THE COURT: I think it would help me to understand
7 what is here if you could explain the nature of the human error
8 involved.

9 THE WITNESS: Yes. So the nature of the human error
10 in Antrim County had to do with the election definitions that
11 were created before the election. It is similar to the problem
12 that occurred in DeKalb County in that there was a last-minute
13 change to some of the ballot designs, and election workers
14 updated the election definitions in some of their equipment but
15 not other equipment.

16 As a result of that, when results were scanned and
17 loaded back into the EMS, the EMS awarded the wrong -- awarded
18 votes from some contests -- excuse me -- from some candidates
19 to the wrong -- to the wrong candidates, so the results were
20 shifted to the wrong candidates from a large subset of the
21 precincts in the county.

22 THE COURT: Okay.

23 THE WITNESS: So that in and of itself is another
24 potential security risk, but there was no evidence that it was
25 done deliberately.

1 MR. TYSON: And, Your Honor, I have one more question
2 along this line.

3 THE COURT: Okay.

4 BY MR. TYSON:

5 Q. Page 48, Dr. Halderman, this is your conclusion in the
6 report before your recommendations; right?

7 A. Yes.

8 Q. And in this paragraph you say, furthermore, the EMS lacks
9 important security updates as weak authentication and access
10 control mechanisms and is vulnerable to compromise if an
11 attacker has physical access to the computer. These are
12 serious vulnerabilities that should be mitigated on a priority
13 basis, but there is no evidence that any of these problems was
14 ever exploited in Antrim County.

15 Did I read that right?

16 A. Yes.

17 Q. And you believe that today; right?

18 A. That there is no evidence that they were exploited?

19 Yes, I have no evidence that they were exploited.

20 Q. And that was despite the presence of vulnerabilities;
21 right?

22 A. Yes.

23 Q. Okay.

24 MR. TYSON: So, Your Honor, at this point we would
25 again move 1225 into evidence. I believe we have shown its

1 relevance to the case.

2 MR. ANDREU-VON EUW: We don't see the relevance, and
3 it is still hearsay, Your Honor. But no objection.

4 THE COURT: You don't see the relevance, but you're
5 not -- you don't have an objection?

6 MR. ANDREU-VON EUW: Correct.

7 THE COURT: That's fine. That is a perfectly
8 acceptable way of handling it, which I would recommend to
9 everybody in here for the next day or two. Thank you -- or
10 three or four because we had a lot of objections on relevance.
11 And so that is acceptable.

12 Why don't we stop at this point, and then I can also
13 read it. And we'll start tomorrow at 9:30 then.

14 MR. TYSON: Thank you, Your Honor.

15 COURTROOM SECURITY OFFICER: All rise. Court is in
16 recess.

17 **(The proceedings were thereby adjourned at 5:26**
18 **PM.)**

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C E R T I F I C A T E

UNITED STATES OF AMERICA

NORTHERN DISTRICT OF GEORGIA

I, SHANNON R. WELCH, RMR, CRR, Official Court Reporter of the United States District Court, for the Northern District of Georgia, Atlanta Division, do hereby certify that the foregoing 246 pages constitute a true transcript of proceedings had before the said Court, held in the City of Atlanta, Georgia, in the matter therein stated.

In testimony whereof, I hereunto set my hand on this, the 18th day of January, 2024.

Shannon R. Welch

SHANNON R. WELCH, RMR, CRR
OFFICIAL COURT REPORTER
UNITED STATES DISTRICT COURT

UNITED STATES DISTRICT COURT
OFFICIAL CERTIFIED TRANSCRIPT

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